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Goldstücker has admirably attacked Böhlingk, but for Böhlingk we forget Goldstücker;
and Whitney has admirably attacked Pāṇini, but for Pāṇini we forget Whitney.

I adore Böhlingk because he reveals to us the spirit of Pāṇini,
I adore Pāṇini because he reveals to us the spirit of India,
I adore India because it reveals to us the Spirit, the Spirit.

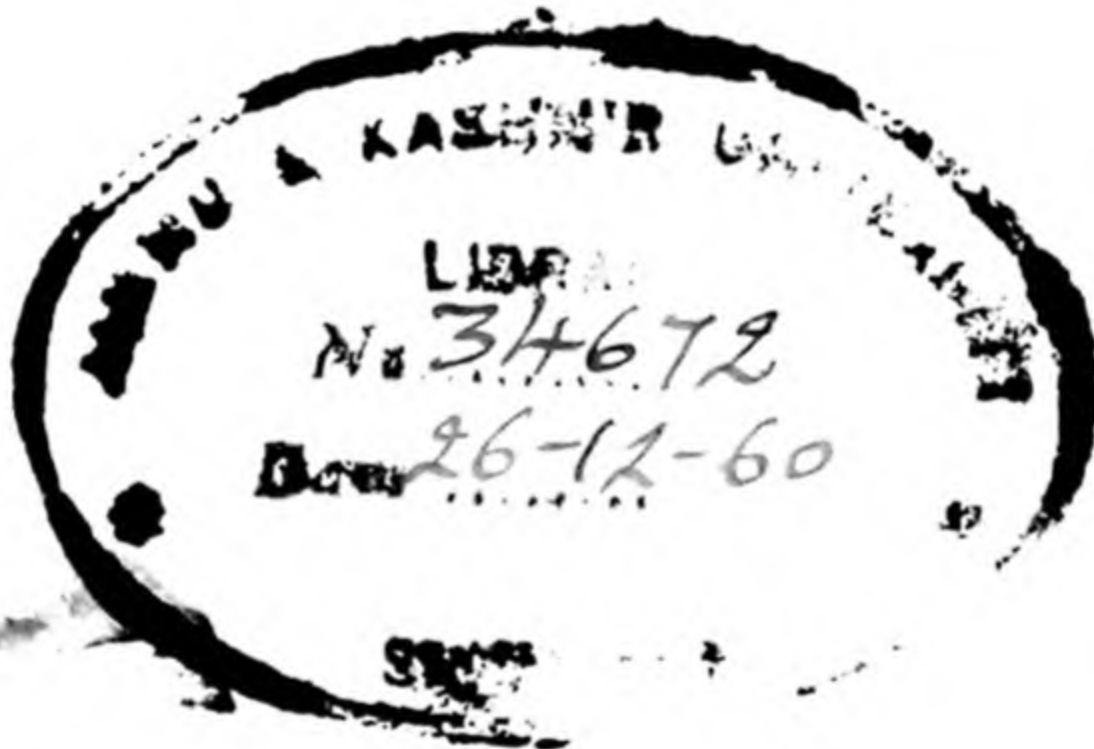
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BIBLIOGRAPHICAL TABLE.

Note. — The subsequent table does not claim to be a full account of the literature on Pāṇini, for, since the article intends in the first place to show the importance of explaining Pāṇini by the aid of Pāṇini himself, that is Böhrtlingk's edition with its numerous indexes, several subjects such as the relation between Pāṇini and Yāska and the *Prātiśākhya*s, between Pāṇini and the language of the literary documents had to be left out and even the commentaries on Pāṇini to be sparingly dealt with.

1. Sources and dictionaries.

SP. = Sūtra-Pāṭha, Böhrtlingk's edition, p. 1—480. Adhy. = adhyāya, pā. = pāda, sū. = sūtra, fin. = end of pāda. Often the mere mentioning of three ciphers suffices.

GP. = Gaṇa-Pāṭha, Böhrtlingk's edition, p. 95*—145*.

DhP. = Dhātu-Pāṭha, Br. Liebich's edition. Zur Einführung in die indische einheimische Sprachwissenschaft. Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Philos.-histor. Klasse, Jahrgang 1920, 10. Abhandlung. Heidelberg 1920.

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Note. The textual tradition of the Gaṇa-Pāṭha. — See Böhlingk's edition p. 95* (on interpolations), Winternitz III p. 396 (on the Gaṇaratna-mahodadhi des Vardhamāna); Liebich, Zwei Kapitel p. XXVI (on the linguistic importance of the Gaṇa-Pāṭha).

I. THE GRAMMAR OF THE INDECLINABLES.

I. THE INDECLINABLES IN GENERAL.

§§ 1—14. Divisions of the indeclinables according to etymology and function.

§§ 15—20. The technical terms of the grammar of indeclinables.

§ 1. Synoptical table of the two passages on the indeclinables.

The indeclinables (*avyayas*) are enumerated by Pāṇini in the passages 1, 1, 37—41 and 1, 4, 56—98 as follows:

I. *Svar-ādi* (1, 1, 37).

1a. *Svar-ādi-gaṇa*, SP. 1, 1, 37; GP. 254.

b. *Nipāta*, see II.

2. Words derived from pronouns [and from nouns and numerals, see § 6] missing a complete declension and ending in a suffix which serves at the same time as *taddhita* (suffix of a denominative noun) and as *vibhakti* (in this context, a declinational ending) [or as adverbial ending], SP. 1, 1, 38; 5, 3, 1—26 [and 5, 3, 27 sqq.].

3. Absolutives and infinitives in *m*, (*tum*), and diphthong, in *tvā*, *tos*, *as*, SP. 1, 1, 39 sq.; 3, 4, 9—66.

4. *Avyayībhāvas*, indeclinable compounds, in many cases formed by the composition of a declined noun [or nominal stem] with a preceding or following indeclinable of the *prādi-gaṇa*, SP. 1, 1, 41 and 2, 1, 5—21.

II. *Nipāta* (cf. I 1 b), SP. 1, 1, 37 and 1, 4, 56.

1. *Cādi-gaṇa*, SP. 1, 4, 57; GP. 85.

2. *Prādayaḥ*, indeclinables of frequent occurrence, 22 (20) in number, summed up GP. 154, which are sometimes used as *karma-pravacanīyas* (infra, 4) and sometimes as *upasargas* i.e. as a class of *gatis* (infra, 3), [and which are often compounded with a following noun in order to make a declinable compound, either *tatpuruṣa* or *bahuvrīhi*, and with a following or preceding nominal stem to make an *avyayībhāva*], SP. 1, 4, 58 sq., GP. 154.

3. *Gatis*, 'close adverbs' to finite verbs (*tiñ*) and 'prefixes' to deverbative nouns and indeclinables (*kṛt*). As prefixes the *gatis* are said to be 'compounded with' (*saha*) the following *kṛt*.

a. *upasargas* used as *gatis*; compare English compounds such as 'to beset', 'to understand', constructions such as 'to strike out', 'to blow up', and compound participles such as 'well-bred', 'ill-bred', SP. 1, 4, 60.

- b. indeclinables and some noun-cases, and derivatives from nominal stems used as indeclinables, cf. compounds such as 'to back-bite', 'to way-lay', 'to fulfil', 'to white-wash', 'to cross-question', 'to foretell', and constructions such as 'to walk along', 'to look around': *ūryādi-gaṇa*, *cvi-dāc* etc., SP. 1, 4, 61—79, GP. 31 and 243.

Supplement: the position of the *gatis* in the sentence, SP. 1, 4, 80—82.

4. *Karma-pravacaniyas* or '*prādayaḥ*' syntactically loosened from the verb, either requiring an accompanying noun-case or used as 'free adverbs' without an obligatory construction, SP. 1, 4, 83—98.

Note I. Pāṇini's terminology. — (a) As a rule, the first member of a compound is said to be 'compounded with' the second; for instance in SP. 2, 1, 4 *sup* (supplemented from *sū*. 2, cf. *Kāśikā*) refers to the first and *saha supā* to the second member of a compound. (b) The term *samāsa* is never applied by Pāṇini to the construction of a finite verb with a close adverb such as *pra tiṣṭhati* (cf. SP. 8, 4, 14).

Note II. An explicit exception to the *adhikāra*. — The *sūtras* 1, 4, 58—60, where the *upasarga* used as a *gati* has two technical names, form an explicit exception to the *adhikāra* 1, 4, 1 as indicated by *ca* in *sū*. 60; cf. *sū*. 2, 1, 23.

§ 2. Character of the two enumerations of indeclinables in SP. 1, 1, 37 sqq. and 1, 4, 56 sqq.

The two enumerations given in these passages closely resemble classifications, the one being based on etymology and the other on function. A few changes in the formulation illustrate this:

A. classification according to etymology, 1. indeclinables the etymology of which cannot be given, e.g. *pra*, *ca*, 2. denominative indeclinables [with the inclusion of isolated noun-cases], 3. deverbative indeclinables, 4. compound indeclinables containing a noun-stem and an *upasarga*, [and 5. indeclinables derived from a sentence and containing particles such as *yathā* and *yāvat*], and

B. classification according to function, 1. free or descriptive adverbs, 2. close adverbs changing the notion of the verb, 3. *karma-pravacaniyas* or originally close adverbs which, syntactically loosened from the verb, are used (either as free adverbs or) in close construction with a noun-case, 4. interjectional, emotional and syntactical-relational particles.

§ 3. The classification of words in the *Bṛhad-Devatā* (*adhy*. 1 *śloka* 39 c.d and 40 a b, *śl*. 42—45; *adhy*. 2 *śl*. 89—125).

In the *Bṛhad-Devatā* four word-classes are distinguished, nouns (*nāman*), verbs (*ākhyāta*), *upasargas* (without Pāṇini's functional distinction of some of them as *gatis* and *karma-pravacaniyas*) and *nipātas* (in the limited sense of relational and emotional particles). The *upasargas* and *nipātas* are not yet subordinated to a higher genus as in Pāṇini, the

denominative and deverbative indeclinables being considered as a form of *nāman*. Cf. *Bṛhad-Devatā*, adhy. 1

śl. 43. *aṣṭau yatra prayujyante*
nānārtheṣu vibhaktayaḥ
tan nāma kavayaḥ prāhur
bhede vacana-liṅgayoḥ.

śl. 45. *kriyā bhinirvṛtti-vaśopajātaḥ*
kṛd-anta-śabdābhihito yadā syāt
saṃkhyā-vibhakti-avyaya-liṅga-yukto
bhāvāḥ, tadā dravyam ivopalakṣyaḥ.

Although in śl. 43 only three aspects of the noun are mentioned, case (*vibhakti*), number (*vacana*) and gender (*liṅga*), yet from śl. 45, where the action (*kriyā* or *bhāva*) denoted by a *kṛt* is taken as a thing (*dravya*), i.e. where the verb in case of a *kṛt* has the character of a substantive, it follows that a noun really has four aspects to be arranged thus: A. declension, 1. case, 2. number, 3 gender, and B. transition into an indeclinable noun-form.

Although Occidental grammar (cf. Macdonell's *Vedic Grammar*) agrees with the *Bṛhad-Devatā* in calling infinitives and absolutes nominal verb-forms, Pāṇini's conception is evidently more correct.

§ 4. The sūtra-like passages in the *sva-ādi-gaṇa* (§ 1 I 1).

GP. 254 no. 40: *vad-antam avyaya-saṃjñam bhavati: brāhmaṇavat, kṣatriyavat*, cf. SP. 5, 1, 115—117; no. 89: *tasīl-ādayas*¹⁾ *taddhitā edhāc-paryantāḥ*²⁾, *śas-tasī*³⁾, *kṛtvasuc suc*⁴⁾, *āc-thālau*⁵⁾, *cvyarthās*⁶⁾ *ca*. The two glosses paraphrase and extend SP. 1, 1, 38 (§ 1 I 2). The expression *edhāc-paryantāḥ* adds to the pronominal adverbs of Pāṇini (cf. 5, 3, 1 and 2) the adverbs derived from nouns and numerals; the separate mentioning of *āc* refers to 5, 4, 57 sqq., see footnotes 1, 2 and 5; and the *cvyarthās*, called *gatis* for syntactical reasons in the *Sūtra-Pāṭha*, are called *sva-ādy-avyayas* for etymological reasons in the *Gaṇa-Pāṭha*.

GP. 254 nos. 72—73: *k(tvā)-(tos)un-k(as)unaḥ, kṛn makāra-saṃdhyakṣarānto*, 'vyayibhāvaś *ca* repeat and paraphrase SP. 1, 1, 39—41 (cf. § 1 I 3 sq.: deverbative and compound indeclinables).

§ 5. The instances summed up in the *sva-ādi-gaṇa* (§ 1 I 1).

The instances of GP. 254 form three main groups: A. 1—39, 41—45, indeclinables with accent mentioned; B. 46—71, 74—88, 90—95, inde-

¹⁾ *-tas*, SP. 5, 3, 7 sqq.

²⁾ *-edhā*, 5, 3, 46.

³⁾ *-śas*, 5, 4, 42 sq.; *-tas*, 5, 4, 44—49; *tasi* and *tasīl* distinguished by accent: *vāsudevatās, kūtās*.

⁴⁾ *-kṛtvas* 5, 4, 17; *-s*, 5, 4, 18.

⁵⁾ *-ā*, 5, 3, 36—38 and 5, 4, 57—67; *-thā* 5, 3, 111.

⁶⁾ 1, 4, 61; 5, 4, 50; 7, 4, 26 and 5, 4, 52 sqq.

clinables with no accent mentioned; C. 96—150, instances not given by „K.” (the Pandit-edition of the Kāśikā, see Böhtlingk's edition, p. 95*). Within these groups there are sub-groups marked either by semasiological coherence (e.g. 15—20 adverbs of time) or by similarity of ending (e.g. 1—5) or by etymological coherence (e.g. 131—136, derivatives from *cira*).

Judging from the majority of cases the *gaṇa* may be defined as an illustrative and not exhaustive collection (*ākṛti-gaṇa*) of descriptive adverbs, i.e. adverbs of place, rank and time, of manner, circumstance and causality. On the other hand the first sub-group of the *nipātas*, the *cādi-gaṇa* contains particles expressing conjunctional, emotional and interjectional meanings. If we enter into the details we meet with several difficulties; in the first place why are the title-word *svar* and *bhūr* and *bhuvar* (nrs. 119 sq.) placed in the descriptive *gaṇa*, and why are other instances of sacral and interjectional language repeated in both the *gaṇas*: *he*, *hai* (GP. 254 nos. 35 sq., GP. 85 nos. 120 sq.), *bata* (no. 41 and no. 93), *svadhā* (57; 41), *vaṣaṭ* (58; 39), *om* (118; 42)? And why are the adverbs in *vat* twice mentioned (GP. 254 no. 40 *vad-antam*, and GP. 85 no. 90 when compared with no. 89 *iva*)?

Note I. *Svar*. — *Svar*, originally a noun, cf. Wackernagel III § 160 d, p. 313, but as a sacral interjection 'may I obtain heaven!' (cf. Van der Hoogt, Vedic Chant, p. 86 sub III c) no longer felt as such.

Note II. Evident interpolations in the *gaṇa*. — *Samvat* (106, 'era beginning in 58 B.C.') and *san* (K. 41 bis, 'era reckoned from 593 A.D.') illustrate what little respect the Indian schoolmasters had for their grammatical lore.

§ 6. Denominative indeclinables (SP. 1, 1, 38, § 1 I 2).

The suffixes of the class SP. 1, 1, 38 are considered by the SP. to be at the same time *vibhaktis* (cf. the *adhikāra* 5, 3, 1) and *taddhitas* (4, 1, 76). GP. 254 in its sūtra-like passages explicitly extends the class to all 'denominative indeclinables', i.e. derivatives from pronouns, nouns and numerals with all kinds of adverbial meanings.

§ 7. Deverbative indeclinables (SP. 1, 1, 39 sq., § 1 I 3).

Deverbative indeclinables or infinitives and absolutes are fully discussed in the passage 3, 4, 9—66; cf. the analysis of the third adhyāya in § 35. The *kr̥ts* ending in *am* have partly *kit*-form of root (SP. 3, 4, 12, e.g. *apalūpam* and partly *ṇit*-form (SP. 7, 2, 115 sq., and 3, 4, 12 and 22 sqq. *bhójam*, *kāram*; cf. Delbrück § 229 and § 225).

§ 8. Indeclinables formed by composition (1, 1, 41; § 1 I 4).

The principal passage dealing with the *avyayībhāvas* (2, 1, 5—21) forms part of a set of two adhyāyas containing the grammar of compounds (adhy. 2 pā. 1 and 2). The following cases are enumerated: indeclinables formed with a following or preceding indeclinable of the *prādi-gaṇa*

(*akṣapari* 2, 1, 10; *ākumāram* 11—16); other indeclinables or isolated noun-cases functioning as *upasarjana* (*yathā*, *yāvat*, 7 sq.), *bahis* and words in *-ac* 12; *pāre* and *madhye* 18. In GP. 105 (SP. 2, 1, 17) many examples of compounds resembling an absolute case are registered: *tiṣṭhadgu*, 'when the cows stand to be milked' = after sunset; *suṣamam*, 'when the season is favourable'; *lūna-yavam*, 'after the barley has been cut'. Similar are the indications of place and circumstance in SP. 2, 1, 21 *kṛṣṇagaṅgam*, 'where the water of the Ganges is black', and in 19 sq. *trimuni* 'when three *munis* meet' (in a proverbial expression); *sapta-gaṅgam* 'where the branches of the Ganges are seven'.

§ 9. Case-isolation (GP. 254 nos. 17 sq. *divā*, *rātrau* etc., GP. 85 nos. 62 sq. *velāyām*, *mātrāyām*), § 1 I 1 and II 1.

An important means for the derivation of adverbs is the isolation of a case from the rest of the declension; although many examples based on this procedure are mentioned, the principle is nowhere explicitly laid down, (Cf. SP. 1, 1, 38 and 1, 4, 83 sq.).

§ 10. Indeclinables considered to be nouns with apocopated case-ending and neuter stems, SP. 1, 2, 47; 2, 4, 18; 2, 4, 82—84.

In su. 2, 4, 82, *avyayād āp-supah* (to be supplemented with *luk* 2, 4, 58) we meet with the rule that after an indeclinable the feminine ending *ā* and the case-suffixes are rejected. Böhtlingk adds to this sūtra the explanation 'since the indeclinables are noun-stems (*prātipadika*) according to 1, 2, 45 sq. one could be inclined to apply grammatical motion and declension to them'.

This explanation is far from sufficient. Two details may be added: 1. when a noun ends in the feminine ending *ā*, the grammarians consider this *ā* to be a contraction of a *prātipadika*-vowel *ā* and an additional suffix of motion *ā* (SP. 4, 1, 4 sqq.); therefore when sū. 2, 4, 82 says that the ending *ā* is apocopated the reader must understand that *ā* is replaced by *a*; 2. when a noun ends in *ī* without a separate masculine stem besides it (cf. on the other hand SP. 4, 1, 5; 4, 1, 15 etc.), this *ī* is left untouched as far as this sūtra is concerned.

These consequences of sūtra 2, 4, 82 receive special importance 1. when read in connexion with 2, 4, 83 (the final *a* of a *prātipadika* functioning as last member in an *avyayībhāva* is changed into *am*) and 2. when combined with 2, 4, 18 (an *avyayībhāva* is of the neuter gender) and 1, 2, 47 (the end-vowel of a *prātipadika* is shortened in the neuter, e.g. *naṣṭa-śrī-*, nom. sg. m. *naṣṭa-śrīḥ* and n. *naṣṭa-śrī*, Monier Williams, grammar § 190).

With the aid of the sūtras mentioned sub 1 the form *madhyegaṅgam* (SP. 2, 1, 18) can be explained, whilst the *avyayībhāva* '*adhistri*' (Kāśikā to SP. 2, 1, 6) is derived according to the sūtras mentioned under 2.

As Böhtlingk does not even add examples to the main case of 2, 4, 82, *abhyagni* (2, 1, 14) and *trimuni* (2, 1, 19) may be here mentioned as such.

§ 11. The sūtra-like passage in the *cādi-gaṇa* (GP. 85 no. 146; § 1 II 1).

Upasarga-vibhakti-svara-pratirūpakāśca nipātāḥ, the *nipātas* are often externally identical with *upasargas*, declined nouns, conjugated verbs and vowels (no. 50—58), but differ from them by their interjectional, either emotional or imperative colouring.

The passage, thus, is an elucidation of the *gaṇa*, which originally ended at no. 145.

§ 12. The instances summed up in the *cādi-gaṇa* (GP. 85; § 1 II 1) 1).

Just as in the *svarādi-gaṇa*, sub-groups may here be distinguished; thus nos. 1—5 and 13—18 are connected by similarity of function, cf. SP. 8, 1, 24 and 30; nos. 37—42 form a group of sacral interjections; the group 59—58, (following the method of the Śiva-sūtras with reference to quantity), teach the interjectional use of vowels and diphthongs 2); nos. 75—80 all end in final o and nos. 114—116 form an etymologically connected group.

Considering the collection in the light of the sūtra-like passage quoted supra § 11 and taking account of the fact that in the Vedic chant pronouns and *upasargas* are often used as sacral interjections (cf. Van der Hoogt, p. 16), we must acknowledge that the *gaṇa*, although overlaid with interpolations, still obeys the same principle, that is the common interest in the different forms of emotional language and very likely the peculiar word-order and intonation connected with conjunctive and modal particles. Thus we can understand the mentioning of the *upasargas* *ava* and *anu* (117 sq.) used imperatively, finite verbs as *brūhi* (85) and *śaṅke* (100), noun-cases expressing approval as *satyam* (106) and *ṛtam* (107), pronominal adverbs as *iha* (154) and *iddhā* (108) used imperatively, and descriptive adverbs as *śukam* (101, 'quickly!' cf. *śu* GP. 254 no. 147). As to peculiarities of word-order and intonation, notice that *satyam* heads a sentence, *śaṅke* is an intercalation; *ha*, *aha* (3 sq.) *khalu*, *kila* (44 sq.), *sma* (49), *u* (60), *tu*, *nu* (86 sq.), *kam* (124), *aṅga* (131) and *vai* (145) follow the heading-word of the sentence, most of them being enclitic 3), others again are often added to the verb (nos. 1—5, SP. 8, 1, 58).

§ 13. The *prādayaḥ* (GP. 154, SP. 1, 4, 58) in their different functions.

(1). As member of a compound of which the other member is a noun. — The instances of the *prādi-gaṇa*, when compounded with a following noun to make a *tatpuruṣa* or *bahuvrīhi*, or with a preceding or following noun to make an *avyayibhāva*, are not mentioned with a special name in the section on compounds in general (2, 1, 3—2, 2, *fin.*), although in later

1) For older collections of *nipātas* see Macdonell to Bṛhad-Devatā 2, 93, vol. II, p. 58.

2) The repetition of the vowel in instances as *i Indra* is evidently a vocalic play.

3) Delbrück, p. 471, Hirt V, p. 332 and cf. SP. adhy. 8 pā. 1.

sections the *prādayaḥ* in *bahuvrīhis* are called *upasargas* (5, 4, 119; 6, 2, 177; and see § 19). As to linguistic facts all the *prādayaḥ* are met with in compositions with an accompanying noun, although some are seldom and others frequently met with in this function.

(2). As 'close adverb' to a *tiñ* or prefix to a *kṛt* ('*gati*', SP. 1, 4, 60). — Most of the *prādayaḥ* are regularly construed as *gatis*, however *dus* and *su* are not often met with in this function before finite verbs, e.g. *duś caranti* (BRW. III 703, Rāmāyaṇa 3, 2, 25); the dictionaries moreover mention: *sunirvavau* (MWD. 1220), *su baddhvā* (BRW. VII 1025, *Mṛcchakaṭikā* 176, 1 with the suffix *ktvā*, yet no imitation of Vedic idiom, SP. 7, 1, 38). It appears from the rare use of these constructions that these groups of finite verb with *su* and *dus* are analogy-formations after compound *ta*-participles.

(3). As independent word (*karma-pravacaniya*), SP. 1, 4, 83—98, § 1 II 2 and 4. — As to the *karma-pravacaniyas* Pāṇini and his commentators mention:

the construction with a noun-case for:

| GP. 154 no. | SP. 1, 4 sū. |
|---|--------------|
| 5 <i>anu</i> | 84—86 |
| 22 <i>ūpa</i> | 87 |
| 21 <i>pari</i> 3 <i>apa</i> | 88 |
| 12 <i>ā</i> | 89 |
| 20 <i>prati</i> 5 <i>anu</i> 21 <i>pari</i> | 90 |
| 19 <i>abhi</i> | 91 |
| 20 <i>prati</i> | 92 |

the use as 'free adverbs' for:

| GP. 154 no. | SP. 1, 4 sū. |
|-------------------------------|--------------|
| 14 <i>adhi</i> 21 <i>pari</i> | 93 |
| 17 <i>su</i> | 94 |
| 16 <i>ati</i> | 95 |
| 15 <i>api</i> | 96 |
| construction with noun-case | |
| 14 <i>adhi</i> | 97 sq. |

Peculiar is the retrograde order of discussion in the SP., when compared with the GP.

Note I. Wider use of the *karma-pravacaniyas* in the Vedic idiom. — The dictionaries moreover state the independent use of *ni* (Atharva-Veda 10, 8, 7), *nis* (I. 6, 18, 3 etc.), *pra* (Aitareya-Brāhmaṇa 2, 40), *vi* (cum accus., RV.), *su*, 'good, excellent' in the Veda.

Note II. Comparison of the *upasarga*-lists in the GP. and the Nirukta (vol. II p. 41; 1, 1, 5 = 1, 3) ¹⁾. — The Gaṇa-Pāṭha enumerates the *upasargas* in the order 1. *pra*, 2. *parā*, 3. *apa*, 4. *sam*, 5. *anu*, 6. *ava*, 7. *nis*, 8. *nir*, 9. *dus*, 10. *dur*, 11. *vi*, 12. *ā*, 13. *ni*, 14. *adhi*, 15. *api*, 16. *ati*, 17. *su*, 18. *ud*, 19. *abhi*, 20. *prati*, 21. *pari*, 22. *upa* and the Nirukta in the order 1. *ā*, 2. *pra*, 3. *parā*, 4. *abhi*, 5. *prati*, 6. *ati*, 7. *su*, 8. *nir*, 9. *dur*, 10. *ni*, 11. *ava*, 12. *ud*, 13. *sam*, 14. *vi*, 15. *apa*, 16. *anu*, 17. *api*, 18. *upa*, 19. *pari*, 20. *adhi*. Here it is worth while noticing that GP. and Nirukta often give the same 'pairs' of *upasargas*, thus GP. 21, 22 *pari*,

¹⁾ Cf. Macdonell's note to Brhad-Devatā 2, 94 (vol. II p. 58).

upa = N. 19, 18; GP. 19, 20 *abhi, prati* = N. 4, 5; GP. 16, 17 *ati, su* = N. 6, 7; cf. SP. 1, 4 sū. 87 sq., 90 sq., 94 sq.; and moreover GP. 1, 2 *pra, parā* = N. 2, 3; GP. (7, 8), (9, 10) *nir, dur* = N. 8, 9.

Indeed there must have been much activity on the side of teachers and pupils about these *upasargas* even since Vedic times!

§ 14. The *gatis* enumerated SP. 1, 4, 61—79 and the *gatigaṇas* referred to (GP. 31 and 243; § 1 II 3).

The sūtras 61—72 contain besides a few neuter words (*sat, asat, manas, adas*) as a rule indeclinables; many of the instances mentioned by GP. 243 look like isolated noun-cases, and the same holds good for sūtra 75 sqq.; generally speaking there is a tendency to group according to similarity of ending.

§§ 15—20. The technical terms of the grammar of indeclinables as used in the *Aṣṭādhyāyī* according to Böhtlingk's Index (vol. II p. 193 sqq.).

§ 15. The term *avyaya*, § 1 I and II.

Scarcely any rule for the *avyayas* as a general class is given in Pāṇini's grammar; the term is either used to distinguish an indeclinable from a homonymous form of a declinable, e.g. 1, 4, 67 *puro* 'vyayam, or to denote by implied restriction or suggestion from context a species, e.g. an *upasarga* and moreover the *nipāta iti* 2, 1, 6, the absolute in *tvā* 2, 2, 11, the absolute in *am* 2, 2, 20, an *upasarga* 2, 2, 25, an absolute 2, 3, 69, a pronominal adverb 4, 2, 104, a descriptive adverb of time 4, 3, 23 etc.

§ 16. The term *nipāta*, § 1 II.

According to Böhtlingk's index the term *nipāta* only occurs in a few passages. In SP. 1, 1, 14 *nipāta ekāc* refers to the old particle *u* (*uñ* GP. 85, no. 60) and formally to GP. 85, no. 37—42 (supra § 12). In SP. 3, 3, 4 the conjunctions *yāvat* and *purā*¹⁾ (GP. 85, nos. 32 and 68) are called *nipātas* in order to distinguish them from the pronominal and nominal case-forms. In SP. 6, 3, 136 the term seems to have a vaguer meaning. In SP. 8, 1, 30 conjunctive particles are summed up under the name *nipāta*, and in fact the notion *nipāta* is the subject of several passages in adhy. 8 pā. 1 (sū. 30—50; 56—57; 58—65). In all these instances, with the exception perhaps of 6, 3, 136, the term *nipāta* bears on syntactical and modal particles (§ 2, B 4).

§ 17. The terms *upasarga, gati* and *karma-pravacaniya*.

(1). For the *upasargas* as members of a compound of which the other member is a noun the term *upasarga* is met with in the fifth adhyāya, sū. 5, 4, 85 and 119, both belonging to the *samāsānta*-section. In the adhyāyas 6 and 7, which describe how word-components (roots, stems, prefixes,

¹⁾ *Parā* in Böhtlingk's edition p. 113* is a misprint.

suffixes) coalesce into words, the *upasargas* in their adnominal function within a compound are twice mentioned, and then with the term *upasarga* 6, 2, 177; 6, 3, 97 (a rather mongrel sūtra!). In adhy. 2 pā. 1 and 2, on the other hand, they appear under the general name of *avyaya* in 2, 1, 6 (derivation of *avyayībhāvas*) and 2, 2, 25 (numerical *bahuvrīhis* of the type *upadaśa*) and under the wide term *prādayaḥ* in 2, 2, 18, (that *prādayaḥ* here means adnominal *upasarga* results from its coordination with the term *gati*; cf. the examples in the Kāśikā).

(2a). As prefixes to a *kṛt* the *prādayaḥ* are often referred to in the long section 3, 1, 91—3, 3, 130, which, with the exception of a few *prāsaṅgika-sūtras*, treats of the derivation of declinable *kṛts*. Here we only meet with the term *upasarga* (3, 1, 136; 3, 2, 61. 99. 147; 3, 3, 22. 59. 92. 106), placed in the locative in accordance with SP. 3, 1, 92. Likewise in 6, 2, 110 the prefix to a *kṛt*, in this case a *niṣṭhānta*, is termed an *upasarga*.

(2b). As 'close adverbs' the *upasargas* are often mentioned (1, 3, 76; 2, 3, 59, which sūtra in its construction much resembles that of the *upapada*-section just mentioned; 6, 1, 91 sq.; 7, 4, 23; 8, 1, 38 etc.).

(2c). Only in a small number of passages (see Böhtlingk's index p. 225*) is the term *gati* met with and exclusively in rules evidently formulated for all the *gatis* of 1, 4, 60—82.

(3). When used in the function of § 2, B 3, the *prādayaḥ* are exclusively called *karma-pravacaniya*.

Note. The grammar of the *nipātas* and *gatis* in adhy. 8 pā. 1. — Adhy. 8 pā. 1 discusses the sentence-accent and in this connexion gives rules for both the *nipātas* (conjunctive particles) and the *gatis* (with the *upasargas* as a sub-class).

§§ 18—20. Appreciation of Pāṇini's terminology.

§ 18. The term *nipāta* in its wide and narrow significance.

Except in sū. 6, 3, 136, which, followed by the wide rule of sū. 137, has no weight in the matter¹), the term *nipāta* is in fact only used for modal and conjunctive particles (cf. § 2, B 4), a narrow significance which agrees with the Bṛhad-Devatā and the Nirukta (vol. II p. 44—83; 1 pā. 2 and 3 = 1, 4—11) and is likewise consistent with SP. 1, 4, 1, ā *kaḍārād ekā saṃjñā*, read in connexion with 1, 4, 58 sqq. (*upasargāḥ, gatiḥ*) and 83 (*karma-pravacaniyāḥ*). On the other hand this restricted meaning seems to be contradicted by 1, 1, 37 together with 1, 4, 56, *prāg r-īśvarān nipātāḥ*.

We can thus distinguish (1) a wide significance which includes all the indeclinables with a relational meaning (conjunctions, modal adverbs, close adverbs to finite verbs, prefixes to deverbative nouns and indeclin-

¹) Moreover, sū. 6, 3, 131—137 is most likely an interpolation.

ables, close adverbs which have developed into free adverbs, prepositions) and (2) a narrow significance in which the term only denotes the conjunctions and modal adverbs. The wide significance is only met with in 1, 1, 37, and in 1, 4, 56 in a certain way, that is mentally, before having subtracted (cf. sū. 1, 4, 1) from this wide significance the special notions mentioned in 1, 4, 58 ('*prādayaḥ*'), 60 (*gati*) and 83 (*karmapravacanīya*). This distinction of a wide and narrow significance appears to be a kind of logical artfulness chosen for the sake of brevity.

Kātyāyana (MBh. 1, 4, 58—59 vārtt. 1—3) and all the commentators tried to improve upon the text by dividing the sūtra which originally ran '*prādaya upasargāḥ kriyā-yoge*' into two successive sūtras, a reading which penetrated into the tradition of the *mūla*. In this reading the term *nipāta* in its narrow sense (2) embraces the modal and conjunctive particles of sū. 57 (GP. 85) as well as the *prādayaḥ* of sū. 58.

§ 19. Ambiguity of the definition of *upasarga* (1, 4, 58 sq.).

In agreement with the Bṛhad-Devatā¹) Pāṇini (1, 4, 58 sq.) defines the *upasargas* by the aid of the formula *kriyā-yoge* 'in connexion with an action', that is in the sense of the Bṛhad-Devatā, (1) 'in connexion with [the notion of] an action [either expressed or implied]'. However *kriyā-yoge* may also be interpreted as (2) 'in connexion with [a word expressing] an action, [i.e. either a finite verb or a deverbative]'. The first definition is the wider of the two, for it includes the *bahuvrīhis*, for instance (MBh. I p. 342 l. 12):

*vigatāḥ*²) *secakā asmād grāmād: visecako*³) *grāmaḥ,*
pragatā nāyakā asmād grāmāt: pranāyako grāmaḥ.

According to the second definition the *upasargas* are exclusively the set of twenty particles enumerated GP. 154 when used as *gatis*, that is either as close adverbs to finite verbs or as prefixes to deverbative nouns or indeclinables; e.g. *pra* in *pra nayati* and the *tatpuruṣa* derived from it: *praṇāyaka* (with cerebralisation of *n* according to SP. 8, 4, 14).

From the use of the term *upasarga* in 5, 4, 119; 6, 2, 177 and 6, 3, 97 it follows that Pāṇini understands the expression *kriyā-yoge* in its wider sense (1).

¹) The Bṛhad-Devatā, which does not distinguish between *upasargas* and *karmapravacanīyas*, defines (2, 94):

Upasargās tu vijñeyāḥ
kriyā-yogena viṃśatiḥ,
vivecayanti te hy arthaṃ
nāmākhyāta-vibhaktiṣu.

²) *vi* = *vigata*; compare the predicative and attributive use of some close adverbs in English: my father is out, he is well-off, an up-train.

³) With *s*; SP. 8, 3, 65 bears according to Pāṇini's intention on finite verbs and deverbative indeclinables; on the other hand 8, 3, 99 bears on nominal composition as is interpreted by the Kāśikā and proved by the ablative *nakṣatrād* in sū. 100.

Note I. The cerebralisation of *n* at the beginning of the second member of a compound. — The cerebralisation of the *n* in the *bahuvrīhi prāṇasa* (5, 4, 119 Kāśikā) follows SP. 8, 4, 3, where *saṃjñā* specially means 'nickname', cf. Wackernagel I § 170 b, p. 190.

Note II. The relation between the notions *upasarga* and *gati*. — Although sū. 1, 4, 60 *gatiś ca* reminds us in its form of 2, 1, 23 *dviguś ca*, yet these two sūtras are opposite in construction. The Kāśikā interprets 1, 4, 60 by *gati-saṃjñakāś ca prādayo bhavanti kriyāyoge* and 2, 1, 23 by *dviguś ca samāśas tatpuruṣa-saṃjño bhavati*, i.e. the *gatis* are a genus which includes the *prādayaḥ* as a species, but the *dvigus* are a species subordinate to the *tatpuruṣas* as a genus. However, since according to the foregoing pages sū. 1, 4, 58 and 59 have to be taken as one sūtra and *kriyāyoge* to be interpreted in its wider sense, the interpretation as given by the Kāśikā likewise must be so changed that *upasargas* and *gatis* become crossing notions:

| <i>gati</i> | first member of <i>bahuvrīhi</i> or nominal <i>tatpuruṣa</i> | |
|--|---|----------------|
| <i>gatis</i> summed up SP. 1, 4, 61—98 | <i>upasargas</i> | any other word |

§ 20. The term *karma-pravacanīya*.

The term *karma-pravacanīya* (1, 4, 83) is commented upon in the MBh. as follows: '...*karma proktavantah karma-pravacanīyā iti*¹⁾. *Ke punaḥ karma proktavantah?* — *ye saṃprati kriyām nāhuḥ. Ke ca saṃprati nāhuḥ?* — *ye 'prayujyamānasya kriyām āhus, te karma-pravacanīyāḥ*'. Thus according to this interpretation *karman* = *kriyā* and *pravacanīya* = 'suggesting'²⁾, 'not directly mentioning', and consequently *karma-pravacanīya* = 'denoting an action of which [the *kartar*] is not expressed', which means that any *karma-pravacanīya* can be paraphrased or explained with the help of a verb.

The term calls forth two remarks. In the first place the definition *kriyāyoge* and the term *karma-pravacanīya* express almost the same thing! Secondly the term *karman* has here a meaning different from the usual one in Pāṇini, namely 'that which is expressed by the termination of the (personal) passive verb' or 'the grammatical object of a transitive verb', whereas the meaning of 'action' is only met with in the other technical term *karma-dhāraya* = 'owing a *karman* to a creditor' = not processing an action = a compound of two members not related to each other by an intermediate action = a compound not based on a *kāraka*-relation (SP. 1, 4, 23) [nor on a *śaṣṭhī*-relation, SP. 2, 2, 8], but on *samānādhikaraṇatva* (SP. 1, 2, 42 and 2, 1, 49).

It is likely that influences of older schools betray themselves in these inconsistencies, for terms survive the changes in scientific thought both in modern Europe and in ancient India.

¹⁾ On the active meaning of *pravacanīya* cf. SP. 3, 4, 68.

²⁾ Cf. *pra* + *V vac* = to betray, BRW. VI 624 s.v. 1) in fine.

II. KARMA-PRAVACANĪYA AND THE THEORY OF THE NOUN-CASES.

§§ 21—28. The grammar of the *kāraḥas*, noun-cases and *karma-pravacaniyas*. The coherence of the *adhyāyas* 1 and 2.

§ 21. Course of the discussion.

The grammar of the *karma-pravacaniyas* construed with a noun-case demands an examination of Pāṇini's treatment of the noun-cases in the two passages 1, 4, 23—55 (the notion *kāraḥa*) and 2, 3, 1-*fin.* (the use of *sup* or the noun-cases), §§ 22—26, which finally leads up to a comparison of the European notion of preposition and the Hindu terms *karma-pravacaniya* and *dik-chabda*, § 27.

§ 22. The notion of *kāraḥa* (factor of an action), SP. 1, 4, 23—55.

By *kāraḥas* Pāṇini understands the logical or ideational relations between a noun and a verb, or more precisely between an object or anything conceived after the analogy of an object and an action or anything conceived after the analogy of an action. Six or seven such relations are distinguished; (a) the *apādāna* (1, 4, 24) the object from where the movement takes place, or whatever may be conceived by linguistic instinct as a metaphor of such a relation; (b) the *saṃpradāna* (32) the object or person whom one has in view (*abhipraiti*) during the act; (c) the *karaṇa* (42) that which in causal respect is the most necessary means (*sādhakatama*) for carrying out the act; (d) the *adhikaraṇa* (45) the region, the place or time where and when the act takes place; (e) the *karman* (49) the object which is aimed at, sought for (*īpsita*) by the act, or whatever in linguistic respect is conjoined to a verb in a similar way; (f) the *kartar* (54) the agent who is the centre or executor of the act [whereas the instrument is dependent on the executor]; (g) the *hetu* (55) the auctor intellectualis of an act [whilst the executor in this case is only partly responsible].

Evidently Pāṇini tries in this analysis to separate the ideational aspect from the linguistic expression, an attempt which the Occidental linguists of the latter half of the nineteenth century have condemned, misled as they were by the hope of being able to understand language through the exclusive study of its phonal and morphological aspect, i.e. its articulative utterance and the association-system underlying declension and conjugation, as if the application and imitation of physics and a mechanistic psychology were the last word of moral science. And so besides the injustice done to a pioneer of grammar who lived about twenty-five centuries ago by associating with him supposed results of modern grammar, it is even questionable whether Pāṇini has not something still to say to us¹). As to the notion of the grammatical object one may distinguish between the causal relation in acts of producing, annihilating or changing

¹) Whitney's unfavourable judgment (On recent studies in Hindu grammar 1893, p. 171 sq.) moreover rests on an insufficient understanding of the notions *kāraḥa* and *upapada* (§ 25).

an object, and the 'intentional' ¹⁾ relation in the psychical acts of wishing, seeing, hearing, fearing etc. In Pāṇini's definition the 'intentional' relation is considered to be primary, which at all events is an interesting conception.

§ 23. The *kāraka*-theory and the use of the noun-cases (SP. 1, 4, 23—55 and 2, 3, 1-*fin.*).

When making the *kāraka*-theory the basis of the case-syntax Pāṇini attributes the *apādāna* to the ablative or 5th case (2, 3, 28), the *saṃpra-dāna* to the 4th case (13), the *karaṇa* to the 3d (18), the *adhikaraṇa* to the 7th (36), the *karman* to the 2d case (2) 'unless the *karman* is already expressed otherwise' (*anabhihite*, supplemented from sū. 1), i.e. unless expressed by the termination of a passive verb, and the *kartar* to the 3d case or instrumental (sū. 18) 'unless the *kartar* is already expressed otherwise' (sū. 1), i.e. unless the active person or thing is expressed by the termination of a not-passive and not-impersonal verb.

From the analysis given up to this point, two conclusions can be drawn. In the first place the nominative and genitive are only indirectly connected with this *kāraka*-theory (see 2, 3, 46 and 50, and §§ 25 sq.). Secondly the order in the two passages 1, 4, 23—55 and 2, 3, 1-*fin.* differs much, for when attributing to the *kāraḥ* the cipher of the cases which generally correspond to each of them and to the *kartar* the letter *q* as index, the order of the *kāraka*-passage appears to be 5, 4, 3, 7, 2, *q* and the order of the *sup*-passage 2, 4, 3, 5, 7, 1, 6 (see the sūtras 2, 13, 18 etc. of 2 pā. 3).

The second arrangement is in the main based on the morphological order (1, 2, 3 etc.) with three permutations, the postposition of 1 and 6 because of their standing aloof from the *kāraḥ* and the interchange of 3 and 4 owing to mnemotechnical reasons, sū. 12 mentioning verbs which allow a dative or an accusative and sū. 14 explaining how a dative sometimes expresses the *karman* or *ipsita* (1, 4, 49), namely when the expressed verbal notion mentioning the auxiliary act 'defines' or 'circumlimits' the implied verbal notion of the act aimed at ²⁾; for instance in the sentence *edhebhyo vrajati* = *edhān āhartum vrajati*, the expressed notion of the subsidiary act of going is an *upapada* to the implied notion of the bringing, which latter act has the fuel as its *karman*. Thus the 2d and 4th cases are brought into close connection.

Note. *Bhāva* expressed by the *vibhakti* of a verb. — Whereas (1) the termination of the active or middle voice of a causative expresses specially the *hetu* (1, 4, 55), (2) the active or middle voice of a non-causative verb the *kartar* (54) and (3) the passive form of a transitive verb the *karman* (49) ³⁾, on the other hand the *vibhakti* of the passive voice of an intransitive verb expresses the mere occurrence or *bhāva* (SP. 1, 3, 13 and the examples given by the Kāśikā: *glāyate bhavatā, supyate bhavatā, āsyate bhavatā*).

¹⁾ The term is borrowed from Brentano's psychology, see Binswanger's 'Probleme'.

²⁾ Cf. § 34.

³⁾ Böhtlingk's addition: "der Begriff des Accusativs" is misleading.

§ 24. Synoptical table of the different arrangements of noun-cases and *kāra*kas.

| | |
|---|-------------------|
| A. Morphological order: | |
| 1. <i>Sup-sūtra</i> , 4, 1, 2 | 1 2 3 4 5 6 7 |
| 2. Construction of the <i>karma-pravacanīyas</i> , 1, 4, 83—98; 2, 3, 8—11 according to its original conception, cf. § 27 | 2 5 7 |
| 3. <i>Kāra</i> ka-relations and <i>ṣaṣṭhī</i> -relation in <i>tatpuruṣas</i> , 2, 1, 24—48; 2, 2, 8 | 2 3 4 5 7 6 |
| 4. Syntaxis of noun-cases, 2, 3, 1- <i>fin.</i> , cf. § 23 | 2 4 3 5 7 1 6 |
| 5. Secondary use of the genitive 2, 3, 51—68 | (3) 2 4 3 7 q (2) |
| 6. <i>Kāra</i> ka-relation in a compound with final <i>am</i> -absolute 3, 4, 25—46 | 2 3 7 q |
| B. Order of <i>kāra</i> ka-theory: | |
| 1. Definition of the <i>kāra</i> kas, 1, 4, 23—55 | 5 4 3 7 2 q |
| 2. Formal noun-case as first member of a compound, 6, 3, 1—24 | 5 3 (4) 7 6 |
| C. Uncertain principle: | |
| 1. A noun-case as free adjunction to <i>am</i> -absolute 3, 4, 47—58 | 3 (7) 5 2 |
| 2. <i>Kāra</i> ka-relations in <i>tatpuruṣas</i> (and the accentuation of these compounds), 6, 2, 2 | 3 7 2 |
| 3. <i>Kāra</i> ka-relations in <i>tatpuruṣas</i> with <i>ta</i> -participle as second member, 6, 2, 45—48 | 4 2 3 |

Note I. Annotations to the special cases. — The place given to the 1st and 6th cases at the end of the series in A 3 and A 4 is due to the particular syntactical function of these cases (§ 23). Further many deviation from the regular order can be explained by mnemotechnical motives: (A 4) *anuvṛtti* of *bahulaṃ chandasi* from 2, 3, 62 into sū. 63; (B 2) *anuvṛtti* of *ātmanaḥ* from 6, 3, 6 into sū. 7; (C 1) *anuvṛtti* of *tṛtīyāyām* from 3, 4, 47 into 49—51, and of *parīpsāyām* of sū. 52 into 53; (C 3) *anuvṛtti* of *caturthī* from 6, 2, 43 into 45 sq.

Note II. The close relationship between the 3d and 7th noun-case. — As in the passage B 2 the sūtras 6, 3, 7 sq. form an associational (*prāsaṅgika*) digression to sū. 6, the fundamental scheme of this section really contains the *tṛtīyā* and *saptamī* in immediate succession as found in B 1; in C 1 the two cases appear closely related by the fact that the *saptamī* is here an alternative substitute for the *tṛtīyā*; and above all C 2 (sū. 6, 2, 2) is of special interest both by its contents and its redaction: *tatpuruṣe tulyārtha-tṛtīyā-saptamī-upamānāvya-dvītiyā-kṛtyāḥ*.

Note III. The relation between the *kāra*ka-arrangement and the *sup*-series. — The results arrived at in note II allow the following conclusion: the *kāra*ka-arrangement is nothing but the

retrograde form of the *sup*-series with removal of the *saptamī* after the *tṛtīyā* because of the close relationship felt by linguistic instinct between these two noun-cases.

Note IV. Other facts showing the close relationship between the *karaṇa* and *adhikaraṇa*. — In the section 4, 1, 92—4, 2, 91 the author gives the first list of meanings of *taddhita*-suffixes. Here we read: *tasya* (*apatyam*) 4, 1, 92—4, 1, *fin.*, *tena* 4 pā. 2, 1—13, *tatra* (referring to place) 14—20, *asmin* (referring to time) 21—23, *asya* 24—35, *tasya* (*samūhah*), 37—51, (*tasya*) 52—54, *so 'sya* 55, *tad asyām* 57, *sāsyām* 58, *tad* (in accusative-relation) 59, *tad asminn asti* 67, *tena nirvṛttam* 68, *tasya nivāsaḥ* 69, *adūrabhavaś ca* 70 (the last four sūtras bearing on the formation of nouns of localities). The striking tendency of grammatical theory to express the relation between the original and derived nouns with the aid of the instrumental and locative cannot be denied. An analysis of similar passages would give the same result. Finally we may add that in sūtra 3, 3, 117 the suffix *lyuṭ* is said to express both the *karaṇa* and the *adhikaraṇa*.

Note V. Attempt to explain the close relationship between *karaṇa* and *adhikaraṇa*. Interpretation of sū. 6, 2, 2. — The first fact of importance for the explanation of the close relationship between the *karaṇa* and *adhikaraṇa* is the semasiological grouping noticeable in the noun-cases: 1. the predominantly adnominal case: the genitive, 2. the so-called grammatical cases, i.e. the cases which intrinsically demand from speaker and hearer the 'psychical realisation' of the act, the nominative, the dative (*abhiprāya*, the psychical or social effect of the act) and the accusative (the immediate purport of the act, i.e. either the object of causation or of 'intentional' relation), 3. the cases which intrinsically express perceptive relations, the ablative expressing the point from where, the locative expressing the spot where, and the instrumental expressing the means by which the act takes place. In old Greek and German only the first two groups have survived, in Latin moreover the last group was kept as one case-form.

Evidently the Hindu grammarians have not been able to discover from their own language this grouping as it now appears to us after the development of European languages, yet the relationship between the *karaṇa* and *adhikaraṇa* they have been aware of. In order to interpret this interesting fact, sū. 6, 2, 2 demands a closer examination.

For interpreting this sūtra one must read it in connexion with its *adhikāra* '*p. akṛtyā pūrvapadam*' and the later sūtras which limit its sphere of applicability (such as 6, 2, 139 '*...kṛt*', cf. moreover sū. 144). From the sūtras mentioned it follows that sū. 6, 2, 2 only refers to *tatpuruṣas* of which the second member is a noun as such, i.e. a noun which is not of deverbative nature or at least not felt as such. This noun may be either a substantive or an adjective. In section 2, 1, 24—48 this kind of *tatpuruṣa* is treated in general and in 6, 3, 2—20 with reference to the expressed

case-form of the first member ¹⁾). After reading these sections it becomes clear that substantives and adjectives are often compounded with a noun in the relation of *karaṇa* or *adhikaraṇa* (2, 1 sū. 30 sq., 34 sq., 40, 42, 44), but never or scarcely ever in the relation of *apādāna* (2, 1, 37). So no blame may be attached to the Hindu grammarians for their emphasising the semasiological coherence between *karaṇa* and *adhikaraṇa*.

§ 25. The definition of the nominative and the interpretation of SP. 2, 3, 46.

The translation of the sūtra runs: the nominative merely expresses (a) the significance of the nominal stem, (b) the grammatical gender, (c) an amount, (d) the [grammatical or the explicitly described] number.

The main idea of the sūtra is as follows: the nominative expresses only that which is common to all the declinational *vibhaktis*, but that which belongs to each of the other noun-cases separately, namely a *kāraka*-relation, is missing in the function of the nominative; this noun-case is simply an *upapada*, a kind of apposition to that which is expressed by the conjugational *vibhakti* of the verb; for instance in a sentence such as *kaviḥ kāvyam karoti*, *kaviḥ* is merely an *upapada* of the notion of the *kartar*, the *prathamā* singular, of the active verb; and in a sentence such as *kāvyam kriyate*, *kāvyam* is an *upapada* of the *karman* expressed by the passive verb (cf. § 23 Note and § 34).

However, the wording of sū. 2, 3, 46 demands a closer examination. A nominative is said to express (a) the meaning of the nominal stem, (b) the gender and (d a) the grammatical number. Thus in the nominatives *rājñī* and *rājñyaḥ* the meaning of the *prātipadika* *rājan* (cf. Böhtlingk's annotation to sū. 4, 1, 1), of the feminine gender and of the singular or plural number is expressed.

Moreover the nominative like any other case can denote an amount or explicitly described number, e.g. *droṇo vṛhiḥ* ²⁾, *viṃśatir vīrāḥ*.

§ 26. The definition of the genitive and the interpretation of sū. 2, 3, 50.

The sū. *ṣaṣṭhī śeṣe*, 'the genitive is used in the remaining case(s)' is explained by Patañjali ³⁾ as '*karmādibhyo* ⁴⁾ *yo 'nyo 'rthaḥ sa śeṣaḥ*' i.e. another ideational relation than the six *kāraḥ*. Thus the primary sphere of the genitive is its adnominal function such as the genitive of the possessor or possession etc., and only in its secondary function it expresses different *kāraḥ*.

¹⁾ For the *tatpuruṣas* with *ṣaṣṭhī*-relation, see 2, 2, 8 sqq. and 6, 3, 21 sqq.

²⁾ Böhtlingk's recension of Speyer's Syntax p. 179 sq.

³⁾ MBh. I p. 463 l. 9.

⁴⁾ Patañjali begins the *kāraka*-series with the *karman*! cf. § 24 A.

§ 27. Comparison of the passage 1, 4, 83—98 (the meanings of the *karma-pravacaniyas*) and 2, 3, 8—11 (noun-cases with which some of the *karma-pravacaniyas* are construed).

Of these two passages the second in its arrangement is based on the first. In order to prove this, it is necessary to examine the composition of the total section adhy. 2 pā. 3 (the meanings of the declinational *vibhaktis*). Here the different noun-cases are first defined with the aid of the *kāraka* to which they belong in principle (§ 23) and after that (a) the other syntactical relations in which the noun-case is used are enumerated and subsequently (b) noun-cases which are their substitutes in a certain meaning are mentioned; for instance in the passage 28—35 explaining the ablative sū. 28 defines the primary *kāraka* of the noun-case, sū. 29 gives another sphere of it, whilst 30—32 and 34 give the competitive noun-cases, and 33 and 35 are *prāsaṅika* rules.

In the passage 2, 3, 2—12 dealing with the accusative sū. 2 gives the primary *kāraka*-meaning, the *karmatva*; sūtras 4, 5, 8 and partly 12 add further meanings, and sūtras 6—7, 9—11 and partly 12 give the competitive noun-cases. Of these sūtras the 8th has interest for the theory of the *karma-pravacaniyas* as laying down the rule that the *karma-pravacaniya* is in general construed with the 2d case; sū. 9 attributes the 7th case to *karma-pravacaniyas* expressing the notions *adhika* and *iśvara*, sū. 10 sq. attribute the 5th case to *apa*, *ā* and *pari* and to all *karma-pravacaniyas* expressing *pratinidhi* and *pratidāna*.

Consulting now the *karma-pravacaniya*-passage (1, 4, 83 sqq.) the series is seen to begin with such instances as require the 2d noun-case (84—87), then follows *upa* in the meaning *adhika* with the 7th case (sū. 87 partly), then *apa*, *pari*, *ā* with the 5th (88 sq.), and after a digression (90 sq.) about *karma-pravacaniyas* construed with the accusative according to the general rule, sū. 92 mentions *prati* with the 5th case in the meaning of *pratinidhi* and *pratidāna*. The one exception in the correspondence of order is that *adhi* (*iśvare*) construed with the 7th case comes last in the *karma-pravacaniya*-passage (sū. 97) whereas in the section on the *vibhaktis* it is joined with *upa*, likewise requiring the 7th case (*yasmād adhikaṃ yasya ceśvara-vacanaṃ tatra saptamī*, 2, 3, 9).

Whilst the general dependence of the second passage (2, 3, 8—11) on the first (1, 4, 83—98) is evident, the deviations are likewise easily understood. The first and also, in the plan of the composition, most original passage complies both with the old *prādi-gaṇa* (§ 13 no. 3) and the morphological order of the noun-cases (2—5—7) only sū. 1, 4, 87 forming an exception for the sake of mnemotechnical economy. And it is this one exception again which caused the two cases of the *saptamī* to be joined and together placed between the *dvitīyā* and *pañcamī* in sū. 2, 3, 8—11.

§ 28. The European notion of preposition compared with the *karma-pravacaniya* and *dik-chabda* of Hindu grammar; the (extended) adnominal function of the genitive (cf. Speyer's Syntax, p. 113—134 and specially p. 114 note 1).

Speyer, who describes the Sanskrit language as a European grammarian, makes the following remark on the notion of preposition with reference to Sanskrit (p. 114 note 1): 'it is wrong to say that the noun-case attending on the preposition, is governed by it, for it is not the preposition, that causes the case, but it is the general bearing of the case, which is qualified and limited by the preposition'. An instance like *antar veśmani* (Speyer § 165) illustrates his conception; here *antaḥ* is added as an *upapada* to a locative for the purport of specifying the meaning 'in' or 'at' vaguely expressed by the *vibhakti* of the noun. Of similar nature is the use of *saha* where a single instrumental suffices (l.l. § 58 sq., e.g. Rāmāyaṇa 2, 68, 2, *asau mātula-kule... bharato vasati bhrātrā śatru-ghnena*).

Thus the construction of a noun-case with an indeclinable is by origin and in principle not a reasonless mechanical process of association, but the noun-case is as a rule chosen by linguistic instinct in agreement with the general case-meaning, the applicability of which is determined by the meaning of the *avyaya* added to the notion of the verb ¹), and this holds good although in some cases an irrational association has its influence, e.g. in *vinā* with instrumental owing to the contrasting *saha*. Thus the accusative comprises the meaning of the local aim, the object or spot towards which something is moving (*prati* with accusative). In the case of *anu* (after) the aim, the *ipsita*, although itself moving, still directs the movement of the following person or object. Similarly, as the accusative expresses 'what is taken hold of; what space is occupied' (l.l. § 54) indeclinables meaning 'along' (*anu*), 'through' (*tiras*) are construed with the *dvitīyā* (cf. similar constructions in Greek). In accordance with this principle *vi* (in Vedic = between) and the *dik-chabda antarā* (= between, SP. 2, 3, 4) attend on the accusative, not the position where, but the extent over which being the original meaning. Similarly *uttareṇa* (SP. 5, 3, 35 and 2, 3, 31) 'by the northern way which stretches along' and parallel derivatives are attended by the accusative.

However in two cases this principle according to which the preposition is merely an *upapada* of the noun-case demands correction, in as far as the construction is of a different origin, namely (a) in those cases where the noun construed with the preposition ²) expresses a starting point for our mental imagination, a fixed centre from which the spacial situation of something is described, and (b) where as in the Latin 'ubi terrarum' the

¹) Cf. the quotation from Delbrück at the end of this section.

²) Here the preposition resembles such deverbative indeclinables as mentioned by Speyer § 200 sqq.

genitive construed with an indeclinable shows a metaphorically extended use of the partitive adnominal genitive. Examples of case *a* are the construction of the *dik-chabdas* in *-ac* and *-ā* (SP. 2, 3, 29; 5, 3, 30; 5, 3, 36—38) with the *pañcamī*, of case *b* all those *dik-chabdas* (SP. 2, 3, 30 and 5, 3, 27!—41) describing a relative position of one object, towards an other, e.g. *upari* (above) with the *ṣaṣṭhī*¹⁾ (SP. 5, 3, 31 and 2, 3, 30), *adhas* (under) 5, 3, 39, *puras* (before), etc. And for temporal undeclinables with partitive genitive see Delbrück § 112.

The facts quoted explain why the Indian grammarians never needed the notion of 'preposition' for the description of their language; above all they have realised the close relation between *gati* and *karma-pravacaniya*, a relation well defined by Delbrück (p. 432): 'Was die Verbindung mit Casus angeht, so lässt sich aus dem Sanskrit besonders gut nachweisen, dass der Casus ursprünglich zu der mit der Präposition innerlich verbundenen Verbalform trat, und dass erst allmählich sich ein engeres Verhältniss zwischen Casus und Präposition entwickelte. Der Ausdruck, dass die Präposition den Casus regiere, ist ... höchstens bei *ā* (bis) und *purā* (*puras*) 'vor' in ihrer Verbindung mit dem Ablativ angebracht.'

Note I. Adjectives of farness and nearness construed with ablative or genitive (SP. 2, 3, 34). — Instructive for the cases *a* and *b* (ablative of the mental starting point and the extended use of the adnominal genitive) are the adjectives of farness and nearness in their constructions with ablative or genitive. To the few examples mentioned by Speyer (§ 98) the following may be added: (Cappeller, *Bālamāgha* 3, 10, *mūrteva śaktiḥ kvacid askhalanti, nityaṃ Hareḥ saṃnihitā nikāmaṃ Kaumodakī*..., the disc Kaumodakī, 'Resembling-the-Moonlustre', never failing as it is a palpitabile representation of Śakti²⁾, [Viṣṇu's Power] and [by innate magic] always near to Hari whenever he wishes....

Note II. Delbrück's hypothesis illustrated by the opposite process in modern English. — Using the Sanskrit terms we may say that in a sentence such as 'he is laughed at' a *karma-pravacaniya* or indeclinable attending on a noun has developed into a *gati* or close adverb which changes the notion of a verb.

III. GATI, OR INDECLINABLE USED AS A PREFIX OF A DEVERBATIVE NOUN OR INDECLINABLE.

- §§ 29—33. The *adhikāras* of the *ku-gati*-passage (2, 2, 18—22).
 §§ 34—37. The notion *upapada* and the 3d *adhyāya*.
 §§ 38—39. Böhtlingk's translation of the *ku-gati*-passage.

¹⁾ Thus *upari grhasya* shows affinity to a construction such as *grhasya prṣṭhe*.
²⁾ Farquhar, index s.v.

- §§ 40—46. 'Bridge'-character of the *ku-gati*-passage and the *pada-bha*-passage. Logical elegance of Pāṇini's composition. Interpretation of sū. 2, 2, 18.
- §§ 47—49. The cross-references between the *ku-gati*-passage and the 3d adhyāya. Sū. 2, 2, 19—22 interpreted.
- §§ 50—56. The Mahābhāṣya on the *ku-gati*-passage.
- §§ 57—60. Morphological and phonological consequences of the *ku-gati*-passage.

§ 29. The *adhikāras* of the *ku-gati*-passage enumerated.

The leading passage on the *gatis* as prefixes to a *kṛt* consists of the three last sūtras of the difficult passage 2, 2, 18—22. In order to interpret these rules it is in the first place necessary to examine the *adhikāras* on which they are dependent, viz. SP. 1, 4, 1 sq., 2, 1, 1; 2, 1, 2—4 and 2, 1, 22.

§ 30. Interpretation of the *paribhāṣā* sū. 1, 4, 1 sq. Buiskool¹⁾, when explaining the most important *paribhāṣās* or rules of interpretation applied by the commentators to the text, introduces this topic by the prevalence-*paribhāṣā* given as no. 38 in Nāgojībhaṭṭa's *Paribhāṣā-Induśekhara*. This *paribhāṣā* is said to regulate the mutual prevalence between four special *paribhāṣās* regulating themselves the mutual prevalence between two sūtras which would be equally applicable in a special case.

As Buiskool remarks, the method of Pāṇini's grammar is a method of theoretical development and as such foreshadows, in a highly ingenuous manner, the method of historical development characteristic for the modern European science of etymology. In the same way as a European etymologist applies in his construction of an etymology the applicable phonetical laws in their historical order, so does Pāṇini successively submit roots, stems, suffixes and prefixes to the rules of his sūtras. Sometimes the succession of application will be indifferent, but often a difference in the order of application will lead to a different result. In order to escape this difficulty the commentators have laid down the prevalence-*paribhāṣās* to teach with sūtra has, in case of uncertainty, the prevalence. The commentators even went so far as to construe a prevalence-principle regulating the mutual prevalences of those prevalence rules. The whole method is much alike to the principles of exegesis formulated by the Pūrva-Mimāṃsists for the difficult cases where ritualistic texts contradicted each other²⁾. Indeed the whole matter is so intricate and sophisticated or at least subtle that it seems impossible to attribute, as Goldstücker did, any of these scholastic inventions to the time of Pāṇini himself.

For further research it is of importance to notice that the *vipratishedha*-

¹⁾ p. 52 sq.

²⁾ See A. Berriedale Keith, chapter V or G. Thibaut's Introductory Remarks.

paribhāṣā of 1, 4, 2 shows a great resemblance to the asiddhatva-paribhāṣās 6, 1, 86; 6, 4, 22 and 8, 2, 1, all these rules referring to the mutual relation of sūtras and their applicability, that these sūtras without exception have a restricted field of applicability (e.g. sū. 6, 4, 22 bears on 6, 4, 23—128; sū. 8, 2, 1 on 8 pā. 2—8, 4 *fin.*, sū. 6, 1, 86 on a limited subject), and finally that sū. 1, 4, 2 itself follows immediately an adhikāra 1, 4, 1 bearing as such on 1, 4, 1—2, 2, *fin.* So the reader will be almost or quite convinced that 1, 4, 2 is likewise an adhikāra with the same extent of validity.

Partly then sū. 2 is a fuller explanation of sū. 1, for whilst sū. 1 lays down the rule that in the following three pādas technical terms exclude each other, sū. 2 says more clearly that in section 1, 4—2, 2, *fin.* and specially in the *pada-bha*-passage (1, 4, 14—20) it is a feature of composition and redaction that definitions are often too wide and must be restricted by following definitions; e.g. sū. 1, 4, 17 defines *padas* as word-stems before case-endings (except the sarvanāmasthānas) and before denominative noun-suffixes¹⁾, but immediately after this sū. 18 defines the *bha* as a word-stem before such endings and suffixes when beginning with a vowel; strictly speaking 1, 4, 1 would be sufficient to solve the difficulty, but 1, 4, 2 combined with sū. 1 seems to make matters much clearer: *padas* are word-stems before denominative noun-suffixes and case suffixes which are no sarvanāmasthānas and moreover begin with a consonant.

However, not only perhaps as a sort of comment on the preceding sūtra, but certainly by itself sū. 1, 4, 2 is an adhikāra to 1, 4—2, 2 *fin.* and is as such particularly important for the interpretation of the *ku-gati*-passage as will be afterwards shown²⁾.

A general remark may be inserted here. Whilst the subtle argumentation with the aid of prevalence-rules seems to have been greatly developed under the influence of the Pūrva-Mīmāṃsā, the sūtras of Pāṇini may be considered to be an improvement upon the general sūtra-style, for whilst striving for the same pregnancy as found in the Kalpa-Sūtras the author of the Aṣṭādhyāyī at the same time leaves matters less to the risk and caprice of oral tradition. On the other hand the work was not put together as a manual for foreigners, but written for scholars and teachers, thoroughly acquainted with the language. Common sense and general knowledge are presupposed, and the system of composition is not a matter of mechanical algebraic calculation.

§ 31. Interpretation of the adhikāra sū. 2, 1, 1.

Adhyāya 2 begins at the very outset with a pregnant and enigmatic sūtra 2, 1, 1 *samarthaḥ pada-vidhiḥ* = a rule about words (here: declined nouns³⁾ or indeclinables⁴⁾ as last member of a compound, and noun-

¹⁾ See § 42 note.

²⁾ See § 49.

³⁾ SP. 1, 4, 14.

⁴⁾ SP. 2, 4, 82 and 1, 1, 62 sq. with Böhtlingk's note to 62.

stems ¹⁾ or indeclinables as preceding member of a compound) must be fit.' As appears from the examples given in the comments of the Kāśikā the sūtra is meant as an adhikāra of 2, 1 and 2 (theory of composition). The Kāśikā paraphrases *samartha* by *śakta*, and this required fitness consists in the expressing of all the word-meanings [which become conscious] by grammatical analysis: *vigraha-vākyārthābhīdhāne śaktaḥ*. But the Kāśikā adds to this a further or other interpretation: *athavā samartha-padāśraya-tvāt samarthaḥ*; here whilst using the ambiguity of the word *samartha* and giving this word an indirect bearing on the first member of the following compound, the commentator considers the rules about *padas* to be 'fit', [if they refer to] *padas* 'fitting in together' [i.e. logically connected]. And this witty, although difficult formula thus informs the reader that 2, 1 and 2 discuss the rules for composition.

In its interpretation of 2, 2, 18 the Kāśikā refers to 2, 1, 1 as adhikāra: ... *ku-gati-prādayaḥ samarthena (!) śabdāntareṇa saha nityaṃ samasyante*.

§ 32. Interpretation of the adhikāra 2, 1, 2—4.

Sū. 2, 1, 2 stands rather apart, giving an accent-rule for a dependent noun-case placed before a vocative. In as far as such a vocative-group is a phonal unity, it shows likeness to the *samāsas*, subject-matter of 2, 1 and 2 according to 2, 1, 1 and 3. Moreover *sup* of sū. 2 is implicitly supplemented to sū. 4, a circumstance which explains the position of this sūtra as prompted by a wish for mnemotechnical economy.

The meaning of 2, 1, 4 is thus clear: *saha supā = sup saha supā = sub-antaḥ* ²⁾ *saha sub-antena samāsaḥ*, 'a compound (sū. 3) is a declinable noun [standing as first member and] accompanied by another declined noun [as second member]'. The first noun loses as a rule its declinational ending, but is still according to grammatical convention called a *sup* or *sub-anta*, and the final noun receives the termination required by sentence-syntax.

A compound, then, in general is = noun + noun, only by way of exception it is = indeclinable + noun, or noun + indeclinable, or indeclinable + indeclinable. May one of the members be a finite verb? The Kāśikā on 2, 2, 18 gives as example *yād ūri-karōti*; however nowhere in adhy. 8 pā. 1, which treats of finite verbs with preceding *gatis* or following enclitics, the term *samāsa* is used for those close verbal-groups; cf. 8, 4, 14.

§ 33. The term *tatpuruṣa* (SP. 2, 1, 22).

In the European grammars which are favourable to Pāṇini and his system the *tatpuruṣas* are classified as the usually so called compound nouns (e.g. Monier Williams, grammar p. 327); but Pāṇini himself (2, 2, 18—22) includes also indeclinables + deverbative nouns or indeclinables as *saṃskāra-*, *saṃskṛtya*.

¹⁾ SP. 2, 4, 71 and 1, 1, 62 sq.

²⁾ *Sup* = *sub-anta* (1, 1, 72) which evidently includes here the *prātipadikas* as member of a compound.

Note I. The terms *tatpuruṣa*, *karma-dhāraya* and *dvigu*. — The passage 2, 1, 22 — *fin.* offers special interest in connexion with the *adhikāra* 1, 4, 1. The *tatpuruṣas* contain as sub-class the *karma-dhārayas*, in which the relation of the two members is one of concord, e.g. the relation between adjective and noun (*nīlotpala*); and these *karma-dhārayas* contain as a sub-class, the 'theoretical' *dvigus*; e.g. *pañca gāvaḥ* becomes as a 'theoretical' compound **pañca-go-*, from which are derived the neuter 'complexive' *dvigu pañca-gavā-*¹⁾ and the adjectival *dvigu pañca-gu-*²⁾, 'bought with five cows'³⁾. But whereas the reader would expect the term *karma-dhāraya* to be mentioned in sū. 2, 1, 49, its definition is given in 1, 2, 42 in order to escape the difficulties which would arise from the *adhikāra* 1, 4, 1.

Note II. The term *upasarjana*. — The term *upasarjana* being insufficiently defined by Pāṇini (in sū. 1, 2, 43 sq.), it has been necessary to consult the commentators to arrive at a coherent exposition of the theory of *pradhāna* and *upasarjana*. According to the results of this research (Wackernagel II § 58a β) the first member of a *dvigu* is an *upasarjana* and the second the *pradhāna*. However the term *upasarjana* is not only met with in the theory of composition, but also of denominative noun-derivation, where the primary noun is termed *upasarjana*, as is apparent from SP. 6, 2, 36. Thus in the adjectival *dvigus* which are derived with *luk* of the suffix *aṇ* (4, 1, 88 with sū. 83 as *adhikāra*) or *luk* of *ṭhak* (5, 1, 28 with sū. 19 as *adhikāra*) the total 'theoretical' form **pañca-go-* could be termed the *upasarjana* with respect to the desired adjectival *dvigu*. If it be allowed to attribute this implicit argumentation to Pāṇini, the shortening of the second member in the case discussed could be explained by SP. 1, 2, 48; the Kāśikā, however, does not mention forms like *dvi-gu-*, *pañca-gu-* as examples.

§§ 34—37. The notion *upapada* and the third adhyāya.

§ 34. The meaning of the term *upapada*.

Sū. 2, 2, 19 of the *ku-gati*-passage refers with its term *upapada* to 3, 1, 92, one of the *adhikāras* of the section 3, 1, 95—3, 4, *fin.* Thus the interpretation of the passage 2, 2, 18—22 requires a discussion of the term *upapada* and an analysis of the 3d adhyāya.

According to its etymology the term *upapada* indicates a secondary or auxiliary word, and occurrences of this wide meaning are frequent. In SP. 1, 3, 16 and Kāśikā an adjunct such as *itaretarasya* with *vyati lunanti* is called an *upapada*; in 1, 3, 71 the indeclinable *mithyā* is an *upapada* of

¹⁾ Wackernagel II p. 306, § 117 c β and SP. 5, 4, 92; 2, 1, 51 *samāhāre*.

²⁾ With *luk* of the *taddhita*-suffix *ṭhak*, SP. 5, 1, 28 with sū. 19 as *adhikāra*; cf. 1, 1, 63 which sūtra annulates the *kit*-influence (7, 2, 118) of the suffix *ṭhak*. On the 'shortening' (1, 1, 48) of *go* into *gu* see note II. For the adjectival *dvigus* in general see SP. 2, 1, 51 *taddhitārtha-* and Wackernagel II p. 274, § 107 b Anm.

³⁾ SP. 5, 1, 37 *tena kṛitam*.

kārayate; in SP. 1, 3, 77 and Kāśikā *svam* in the sentence *svaṃ yajñam yajati* (or *yajate*) is an *upapada* of *yajñam* and indirectly of the verb, for it defines the *abhiprāya* of the act (sū. 1, 3, 72). According to SP. 1, 4, 105 *tvam* in *tvam bodhasi* is an *upapadam samānādhikaraṇam* of the finite verb, for it defines the *madhyamā*-termination of the verb and stands towards it in the relation of grammatical concord (*samānādhikaraṇatva*¹). In the close construction of a finite verb with an infinitive or participle ending in *-aka* (SP. 3, 3, 10) the finite verb is called the *upapada* or 'auxiliary' to the main notion expressed by the *kṛt*, as is apparent from sū. 2, 3, 14, where the Kāśikā comments: *kriyā kriyārthopapadam yasya so'yaṃ kriyārthopapadaḥ*. 'Tumun-ṇvulau kriyāyāṃ kriyārthāyāṃ' (3, 3, 10) *ity eṣa viṣayo lakṣyate*. *Kriyārthopapadasya ca sthānino 'prayujyamānasya dhātoḥ karmaṇi kārake caturthi vibhaktir bhavati*. *Dvitiyāpavādo 'yaṃ yogaḥ*²).

But although the grammatical term *upapada* always possesses one and the same general meaning, we may distinguish two special applications, the grammatical and logical. Thus in the constructions 3, 3, 10: *vrajati bhojakaḥ*, 3, 3, 11: *vrajati pākāya*, 3, 4, 18: *alam kṛtvā*, 3, 4, 65: *sāknōti bhoktum*, 3, 4, 66: *paryāpto bhoktum*, *alam bhoktum* the declinable *paryāpta-*, the indeclinable *alam*, and the finite verbs *vrajati* and *sāknōti* express 'logical' auxiliaries, whereas in the majority of cases e.g. *nīcaiḥ kṛtvā* and *nīcaiḥ-kṛtya* (3, 4, 59), *coraṃ-kāram* (3, 4, 25), *anu-kṛtya*, and *ādāyacara-* (3, 2, 17) the indeclinables are 'grammatical' auxiliaries, either used with an accent of their own, or as a part of a compound.

§ 35. Analytical table of the third adhyāya.

| Divis. | pā. | sūtra | Subject of third adhyāya. |
|-------------|-----|--------|--|
| Intro. | | | Introductory rules. |
| A | 1 | 1—4 | <i>Pratyayas</i> and their accentuation. |
| | | 5—32 | Root-suffixes. |
| B | | | Derivation of secondary and denominative roots (<i>dhātu</i>). |
| | | 33—90 | Tense-suffixes (<i>vikaraṇa</i>). |
| | | | Formation of <i>lakāras</i> . |
| C adhik. | | 91—94 | Derivation from roots. |
| | | | <i>Adhikāra-</i> and <i>saṃjñā-sūtras</i> , see § 36. |
| Ca | | | Morphology and semasiology of declinable <i>kṛts</i> . |
| „ 1 | 1 | 95—132 | <i>Kṛtyas</i> (<i>karman</i> -relation etc. cf. 3, 4, 70). |

¹) *Adhikaraṇa* = 'relationship of words in a sentence which agree together' (MWD.) whilst in 2, 3, 36 = 'location, sense of the locative case'.

²) Cf. § 23 in fine.

| Divis. | pā. | sūtra | Subject of third adhyāya. |
|----------------|--------|-----------|---|
| Ca 2 | | | Nomina agentis (<i>kartar</i> -relation, cf. 3, 4, 67) and some other <i>kṛts</i> . |
| „ 2 α | 2 | 133—150 | derivation in general, |
| „ 2 β | | 1—83 | „ in case of preceding <i>upapada</i> , |
| „ 2 β | | 84—109 | subject continued; adhikāra: 'bhūte', 84—101. with preceding <i>upapada</i> . 102—sqq. no <i>upapada</i> mentioned, derivation in general, 105. digressive sūtra about finite verb <i>chandasi</i> , |
| „ 2 γ | | 110—122 | <i>prāsaṅgika-sūtras</i> (I), finite verb expressing the past; (cf. sū. 105), |
| | | 123 | <i>prāsaṅgika-sūtras</i> (II), finite verb; adhikāra: <i>vartamāne</i> , |
| | | 124—180 | subject continued: nomina agentis; [<i>vartamāne</i>]. |
| | | 181—186 | <i>Kāraka</i> -relations of <i>-tra-</i> and <i>-itra-</i> suffix, |
| „ 2 δ | 3 | 187—188 | <i>Kta</i> -participles with present meaning; (for <i>kāraka</i> -relations of participles see 3, 4, 70 sqq.). |
| | | 1—2 | Supplement: <i>bhūta-</i> and <i>vartamāna</i> -relations in <i>uṇ-ādi</i> -suffixes. |
| | | 3 | <i>Kṛts</i> ending in <i>-in</i> ; adhikāra: <i>bhaviṣyati</i> , |
| | | 4—9 | <i>prāsaṅgika-sūtras</i> (III), finite verb expressing future, |
| „ 2 ϵ | | 10—15 | (partly <i>prāsaṅgika</i> , IV), declinable and indeclinable <i>kṛts</i> and finite verbs expressing the future. |
| | | 16—17 | <i>Ghañ</i> stem-suffix of nomina agentis without special time-relation (<i>Kāśikā</i> to sū. 16: ' <i>bhaviṣyati</i> ' <i>nivṛttam</i>). 'Concatenative' group. |
| „ 2 ζ | | 18—130 | <i>Kṛts</i> expressing <i>bhāva</i> and other <i>kāraka</i> -relations than <i>kartṛtva</i> . Concrete and idiomatical meanings. |
| Cb | 3 4 | 131— 8 | Moods and tenses of the finite verb (<i>lakāras</i> of <i>tiñ</i>). <i>Prāsaṅgika-sūtras</i> : pā. 3 sū. 158, 163, 167, 169—172, 174: grammatical mood expressed by <i>kṛts</i> . In sū. 167 <i>kāla</i> etc. is an <i>upapada</i> with <i>tum</i> -infinitive. [For a literary example of the construction mentioned 3, 4, 2 see C. Cappeller, <i>Bālamāgha</i> , 1, 29]. |

| Divis. | pā. | sūtra | Subject of third adhyāya. |
|--------------|-----|-----------------|--|
| Cc | 4 | | Morphology and semasiology of indeclinable <i>kṛts</i> . |
| „ 1 | | 9—17 | Vedic infinitives. |
| „ 2 | | 18—21 | Exclusive use of <i>tvā-</i> (<i>ya-</i>) absolutive. |
| „ 3 | | 22—24 | Choice between <i>tvā-</i> and <i>am-</i> absolutive. Use of finite verb. |
| „ 4 α | | 25—46 | Exclusive use of <i>am-</i> absolutive, (sū. 25 and 29 sqq. with noun in <i>karman</i> -relation as <i>upapada</i> [and first member of compound]; sū. 37, 41, 43 with noun in other <i>kāraka</i> -relation as such), the absolutive and the main finite verb derived from the same root, sū. 34 sqq. |
| „ 4 β | | 47—58 | Exclusive use of <i>am-</i> absolutive; noun in different <i>kāraka</i> -relations (3rd, 7th, 5th and 2d) as <i>upapada</i> [and as separate word or as first member of compound]; roots of finite verb and absolutive are different. |
| „ 5 | | 59—64 | Facultative use of <i>tvā-</i> and <i>am-</i> absolutives; indeclinable as <i>upapada</i> [and in both cases as separate word or as first member of compound]. |
| „ 6 | | 65—66 | Constructions with <i>tum</i> -infinitive; <i>śaknoti</i> etc., <i>alam</i> etc. as <i>upapada</i> . |
| Suppl. | | 67—76 | Supplement to Ca—Cc. <i>Kāraka</i> -relations or <i>bhāva</i> in the verbal word (<i>kṛt</i> or <i>tin</i>) itself. |
| D | 4 | 77— <i>fin.</i> | Conjugational <i>vibhakti</i> . Terminations of the finite verb in the different voices, tenses and moods. (The sūtras 113 sq. are partly <i>prāsaṅgika</i>). |

§ 36. The *adhikāra-* and *saṃjñā-*sūtras 3, 1, 91—94.

91: *dhātoḥ*, '[what follows in the adhyāya concerns suffixes] after a root'. — The interpretation follows in positive respect from SP. 1, 1, 67 and the contents of the rest of the adhyāya, and negatively from the contents of the adhyāyas 4 and 5: grammar of the declinational *vibhaktis* (4, 1, 2), grammatical motion (4, 1, 3—81) and denominative derivation of nouns (4, 1, 76—5, 4, *fin.*)¹).

¹) The sūtras 4, 1, 77—81 have a 'concatenative' character.

*92: *tatropapadam saptamīstham*, 'in this section of the work what is put in the locative is *upapada*'. — Since the ablative is now used for indicating the root, a new technical application ¹⁾ of the locative is introduced by the author; see for the general technical meaning, 1, 1, 66. In fact this *saṃjñā* covers the passage 3, 1, 95—3, 4, 66 (§ 35 Ca—c).

93: *kṛd atīn*. — The sūtra gives a definition with the help of the contents of the adhyāya.

94: *vāsarūpo 'striyām*. — The sūtra only refers to the declinable *kṛts* (3, 1, 95—3, 3, 130 = § 35 Ca), from which sūtras, however, we must exclude the passage beginning with *striyām* (3, 3, 94) ²⁾.

§ 37. The kinds of *upapadas* in the third adhyāya.

In general one may say that in Ca, with exception of the *prāsaṅgika-sūtras* I—IV, the nouns and indeclinables used as first member of declinable compounds, and in the *prāsaṅgika-sūtras* of Ca and in Cb the temporal and modal particles construed with a finite verb are 'grammatical' *upapadas*, whereas the *upapadas* in Cc are partly prefixes or preceding nominal members of composition to *kṛts* and as such 'grammatical' *upapadas*, and partly finite verbs or nouns fulfilling more or less the function of finite verbs, construed with indeclinable *kṛts* and as such 'logical' *upapadas*, cf. § 34 in fine.

§§ 38—39. Böhtlingk's translation of SP. 2, 2, 18—22 quoted and criticised.

§ 38. Böhtlingk's translation and interpretation of SP. 2, 2, 18—22.

18: *ku-gati-prādayaḥ* ³⁾; 'Desgleichen werden *ku*, ein Gati (s. i, 4, 60 fgg.) genanntes Indeclinabile und *pra* mit seinen Genossen componirt'. (*kupuruṣaḥ*, *urarikṛtaḥ*, *duṣpuruṣaḥ*, *supuruṣaḥ*).

19: *upapadam atīn*, 'Desgleichen eine Ergänzung, wenn diese kein Verbum finitum ist'.

(*kumbhakāraḥ* u.s.w. Vgl. 3, 1, 92 fgg. zu *Upapada*).

20: *amaivāvyayena* ⁴⁾, 'Eine Ergänzung auch mit einem Indeclinabile, aber nur dann, wenn dieses ein Absolutiv auf *am* ist'.

(*svādumkāram*, *saṃpannamkāram* und *lavaṇamkāram* *bhūkte*. Vgl. 3, 4, 26).

21: *tṛtiyāprabhṛtiny anyatarasyām*, 'Auch ein Instrumental und ein darauf folgender Casus, aber nicht notwendig'.

(*mūlakopadaṃśaṃ* oder *mūlakenopadaṃśaṃ* *bhūkte*, *keśagrāhaṃ* oder *keśeṣu grāhaṃ* *yudhyante*. Vgl. 3, 4, 47 fgg.).

22: *ktvā ca* ⁵⁾, 'Desgleichen mit einem Absolutiv auf *tvā* (*ya*)'.

(*uccaiḥkṛtya* oder *uccaiḥ kṛtvā*. Vgl. 7, 1, 37).

¹⁾ In one case the locative means 'when used in the meaning of', sū. 3, 3, 93.

²⁾ See Thieme p. 27.

³⁾ The sūtra is to be supplemented with *samāsaḥ* (2, 1, 3), *tatpuruṣaḥ* (2, 1, 22) and *nityam* (2, 2, 17). *Nityam* is superseded by *anyatarasyām* in 21 and 22.

⁴⁾ *saha* supplemented from 2, 1, 4.

⁵⁾ *ktvā* instrumental; *saha* supplemented.

§ 39. Difficulties to which Böhtlingk's translation and choice of examples give rise.

In the following respects the translation and interpretation by Böhtlingk afford insufficient or incorrect help to the reader:

1. One cannot even understand from these rules why such common forms as *prakṛtya*, *upetya* etc. are obligatory compounds, for in the examples of sū. 18 only nouns and no absolutives are mentioned, and sū. 22 is only a facultative rule and moreover does not apply to the case.

2. The expression *atiñ* in sū. 19 'wenn diese kein Verbum finitum ist' remains unclear with no other help but such a vague reference as 'cf. 3, 1, 92 fgg.'.

3. The translation *tṛtiyā-prabhṛtini* in sū. 21 by 'ein Instrumental und ein darauf folgendes Casus' ¹⁾ is erroneous; it should be '[the *upapadas* mentioned 3, 4, 47—64:] an instrumental etc.'.

4. In the note to sū. 22 a cross-reference to 3, 4, 59 should have been given.

On the whole Böhtlingk has failed to see the place of this passage in Pāṇini's plan of composition.

§§ 40—46. The *ku-gati*-passage and the *pada-bha*-passage as 'bridges'. Logical elegance in Pāṇini's composition. Interpretation of sū. 2, 2, 18.

§ 40. Course of discussion.

The *ku-gati*-passage forms a bridge between the third adhyāya and three groups of phonological and morphological rules in the 6th and 7th adhyāya as will be explained in §§ 57—60.

In a similar way the *pada-bha*-section (1, 4, 14—20) forms a bridge between the adhyāyas on denominative noun-derivation (adhy. 4—5) and extensive parts of the adhyāyas 6—8. As these subjects are very important with reference to Pāṇini's methods and scholarly merits, the discussion about them will precede the interpretation of sū. 2, 2, 18.

§ 41. The relation between the 6th and 7th adhyāya and the last adhyāya.

The adhyāyas 6—8 form together the grammar of coalescence ²⁾, which partly bears on morphology, processes such as the mutation of the root, the insertion of *i* or *ī* between root and suffix etc., partly on phonology, processes of word- and sentence-accent and the coalescence of the speech-sounds. Generally speaking the closely connected 6th and 7th adhyāyas explain the coalescence of word-components into words, and the 8th the coalescence of words into sentence. In detail, however, the discussion is divided in such a way that adhy. 6 and 7 contain (*a α*) the morphological word-coalescence and word-accentuation, and (*a β*) the vowel-saṁdhi

¹⁾ This translation would require *-prabhṛtayaḥ* in the text.

²⁾ Buiskool calls it in other words the synthetical part of Pāṇini's grammar.

both within the word and the sentence ¹⁾, this combined treatment being useful for mnemotechnical economy, and that adhy, 8 treats of (*b a*) the sentence-accent and (*b β*) the consonantal *saṁdhi* both within the sentence and between the stem-*pada* and the so-called *pada*-suffixes.

§ 42. The meanings of the terms *pada* and *bha*, SP. 1, 4, 14—20.

The term *pada* denotes (1) a complete word (sū. 14) inclusive the last member of a compound ²⁾ i.e. a *sup* (declined noun), *tin* (finite verb) or an *avyaya* ³⁾ (indeclinable), (2) the *prātipadika* which represents the word as preceding member in a compound (sū. 14) ⁴⁾ (3) the stem of a noun before (a) the declinational endings beginning with a consonant except the *s* of the nom. sing. ⁵⁾ (sū. 17), (b) the denominative noun-suffixes (*taddhitas*) beginning with a consonant except *y* ⁶⁾ (sū. 17) and except the case mentioned in sū. 19, (c) the *taddhita*-suffixes beginning with *y* or vowel, but characterised by a grammatical-technical *s* ⁷⁾ (sū. 16), and (d) the stem of a noun ending in *n* before the denominative root-suffixes technically called *kya* (sū. 15).

The term *bha* denotes the stem of a noun before (a) the declinational suffixes beginning with a vowel except in the *sarvanāma-sthāna*-cases: *-am*, *-au*, nom. plur. *-as*, neutr. plur. *-i* (sū. 18 and cf. SP. 1, 1, 42 sq.), (b) the suffixes *-ā*, *-ī*, *-ū* of grammatical motion (sū. 18 and cf. SP. 4, 1, 3—81); (c) the *taddhita*-suffixes beginning with a vowel or *y* except those characterised by a technical *s* (sū. 18), (d) the stem of a noun ending in *t* or *s* before a *matvartha*-suffix (sū. 19) and (e) the Vedic cases referred to in sū. 20 (but missing in the Gaṇa-Pāṭha).

Note. The annotation to SP. 1, 4, 17 by Böhtlingk (edition, I p. 477 „Nachträge und Verbesserungen”). — Böhtlingk annotates to 1, 4, 17, ‘unter den *svādayaḥ* verstehen die Erklärer alle Suffixe von 4, 1, 2 bis 5, 3, 70’ ⁸⁾. The Kāśikā, however, says *sv-ādiṣv iti su-śabdād ekavacanād* ⁹⁾ *ārabhya, ā kapaḥ pratyayā gṛhyante*. The *kap*-suffix mentioned here, is not found in 5, 3, 70 but it is the *samāsānta*-suffix of 5, 4, 151 fgg. ¹⁰⁾, which reference in view of the ambiguity of *ā* ¹¹⁾ comes to this: ‘the author of the sūtra here refers to all endings mentioned

¹⁾ See § 92.

²⁾ A compound in its totality is never called *pada*, cf. SP. 8, 4 sū. 1 and 3.

³⁾ 2, 4, 82 and 1, 1, 62 with Böhtlingk’s note; 1, 1, 63 (*aṅgasya*!) does not bear on this case notwithstanding the rejection by *luk* (adhikāra-sūtra 2, 4, 58).

⁴⁾ 1, 2, 46 (where *samāsa* = preceding member of a compound), 2, 4, 71 and 1, 1, 62.

⁵⁾ This results by the application of the *adhikāra* 1, 4, 1 sq.

⁶⁾ See § 42 Note.

⁷⁾ These are the suffixes *-iya*, *-īya*, *-ya* and *-yu* called respectively *ghas*, *chas*, *gas*, *yus* (Böhtlingk II p. 185* s.v. *sit*).

⁸⁾ Cf. Böhtlingk II p. 145* GP. 257.

⁹⁾ Cf. SP. 4, 1, 2.

¹⁰⁾ Böhtlingk II p. 158* s.v.

¹¹⁾ Cf. SP. 2, 1, 13 and Pāṇini’s technical use of *prāk*.

in the section beginning 4, 1, 2 and ending with the discussion of the suffix *kap* 5, 4, 151—154 [and its negative supplement 5, 4, 155—160]’.

§ 43. The *pada-bha*-section as a bridge between the theory of declension and denominative noun-derivation (adhy. 4—5) and the theory of word- and sentence-coalescence.

The close relation of sū. 1, 4, 14—20 to the adhyāyas 4 and 5 in their totality has been shown § 42 note; the importance of this passage for the last three adhyāyas appears from the fact of meeting with such *adhikāra-sūtras* as 1. *bhasya* (6, 4, 129, *adhikāra* for 6, 4, 129-*fin.*), 2. *padasya* (8, 1, 16), which, combined with *padād* (17) and *anudāttam sarvam* (18) is the *adhikāra* for 8, 1, 19—8, 1 *fin.*, and by itself for 8, 2, 1—8, 3, 54, and 3. *apadāntasya* (8, 3, 55) and *samānapade* (8, 4, 1).

A few examples as to how the *pada-bha*-section functions as a bridge are added:

formation of noun-cases; sū. 1, 4, 17 (§ 42 *pada*, 3a) connects the general sūtra of declinational endings with 8, 2, 7: *rājan-bhis* > *rāja-bhis* (which remains unchanged notwithstanding 7, 1, 9 owing to 8, 2, 2);

formation of the feminine; sū. 1, 4, 18 (§ 42 *bha*, b) connects 4, 1, 15 with 6, 4, 148 and 8, 2, 5: *kuru-carā-* (formed with *ṭa* 3, 2, 16) + *ñ(i)p* > *kuru-carī*;

denominative noun-derivation; sū. 1, 4, 17 (§ 42 *pada*, 3b) connects 5, 2, 124 with 8, 2, 30 and 8, 4, 53: *vāc-gmin-* > *vāk-gmin-* > *vāggmin-* (cf. 8, 4, 47); sū. 1, 4, 18 (§ 42 *bha*, c) connects 4, 1, 84 (with *aṇ* to be supplemented from sū. 83) with 6, 4, 148 and 7, 2, 117: *aśvapati-ā-* > *āśvapatā-*.

Note. The function of sū. 1, 4, 14 (§ 42 *pada*, 1 and 2). — Sū. 1, 4, 14 with reference to the word as part of the sentence connects the seven first adhyāyas with the eighth, and in its application to the first member of a compound forms a bridge between the theory of word-composition (2 pā. 1 and 2) and the last three pādas (the *Tripādī*) of the total work.

§ 44. Logical elegance of Pāṇini's composition.

In the same way as the *pada-bha*-section connects the 4th and 5th adhyāya with the respective parts in the three last adhyāyas, so is the *ku-gati*-passage a bridge between the 3rd adhyāya and the adhyāyas 6—7. Indeed, the more one studies the *Aṣṭādhyāyī* the more one realises the depth and correctness of the characterisation given by Speyer of this work as ‘ein wohl durchdachtes und nicht nur künstliches, sondern auch kunstvolles Lehrbuch’ (Winternitz III p. 386).

§ 45. The interpretation of 2, 2, 18—22 in general, in connexion with its *adhikāra* (*sup saha supā samāsaḥ*) and the internal composition of the adhyāyas 6—8.

The passage 2, 2, 18 sqq. mentions exceptions to the *adhikāra*: *sup saha*

supā samāsaḥ (2, 1, 2—4). Immediately the first *sup* is contradicted by *sū. 18 ku-gati-prādayaḥ*, 'the first member of a compound may be an indeclinable, either (a) *ku* or (b) one of the *gatis* (a prefix to a *kṛt* or a close adverb to a *tiñ* ¹) summed up in 1, 4, 61—98 or (c) one of the instances of the *prādi-gaṇa* in as far as possessing other functions than that of a *gati* (cf. the examples of the *Kāśikā*: *su-puruṣaḥ* etc.).

But what about the second *sup*? Does the introduction of these *ku-gati-prādayaḥ* supersede the second *sup* as well, or is it maintained? The latter alternative would be logical, the former a pardonable licence on the side of Pāṇini. Pāṇini has taken this licence and his ultra-algebraic interpreters and critics may here accuse him of 'bad workmanship', for otherwise such usual forms as *anukṛtya* and *apetya* could not be explained by his grammar. But if both the *sup*s as restrictions are eliminated does this mean that in general there are nine combinations possible for forming a *tatpuruṣa*: *sup + sup*, *sup + avyaya*, *sup + tiñ*, *avyaya + sup*, *avyaya + avyaya*, etc.? For the first member *tiñ* is explicitly rejected in *sū. 19 upapadam atin*, but why does not the author say as well *atinā*?

As Pāṇini gives a grammar and no manual of orthography, a discussion on a doublet such as *atra* and *attra* bears on pronunciation, and his discussion of the compounds is of a similar nature. Therefore a compound is not 'that which is written and printed without any interspace', but is a unity in phonal and ideational respect; ideational and not only notional is this unity, since in Sanskrit a syntactical coherence may be sufficient for the formation of a compound; and phonal is this unity because unifying rules of accent and morphology enter into play.

Now, the construction of an *upapada* (a close adverb or a modal adverb or conjunction) with a *tiñ* is discussed with reference to sentence-accent in *adhy. 8 pā. 1* (e.g. 8, 1, 71), but nowhere in this *pāda* is the term *samāsa* applied to this construction (see Böhtlingk II p. 286* s.v.). On the other hand an *upapada* (an indeclinable, or a noun in *kāraka*-relation) with a following *kṛt* (deverbative noun or indeclinable) is discussed with reference to accent in the passage beginning with the *adhikāra* '*samāsasya*' (6, 1, 223), see e.g. 6, 2, 49 sq., and with reference to morphology in the 7th *adhy.*, see specially 7, 1, 37, where the very term *samāse* is found ²).

Thus from comparing 2, 2, 18 sqq. with the internal composition of the three last *adhyāyas* it follows that a *tiñ* cannot be the last member of a compound; and the reason for this different treatment is evidently their accentuation, for in a *samāsa* of an *upapada* with a *kṛt* one syllable is *udātta* by fixed rule, but a verbal word-group such as *ūrī karoti* can be totally *anudātta* (8, 1, 68 sq.) or accentuated either *ūrī karóti* or *ūrī karoti* [*cana*], (8, 1, 71 and 57 sqq.).

¹) It will afterwards be proved that the latter case must be rejected.

²) A fuller discussion of these passages is given §§ 57—60.

§ 46. Interpretation of sū. 2, 2, 18.

According to the argumentation given in § 45 sū. 18 means: *ku*, a *gati* (as prefix to a *kṛt*) and an indeclinable of the *prādi-gaṇa* (as prefix to a noun) are compounded with a following declinable or indeclinable (nouns, participles, infinitives, absolutives), and this composition is obligatory (*nityam*, to be supplemented from sū. 2, 2, 17). Thus a form such as the absolutive *anukṛtya* must be explained with the help of SP. 7, 1, 37; 6, 2, 139¹⁾ and 2, 2, 18. Similarly all other absolutives, infinitives, participles etc. follow in their accentuation the rules of 2, 2, 18 and 6, 2, 1—6, 3, 24, e.g. *ánukartum* (suffix *tumun* 3, 3, 10 and 6, 2, 50), *anukāram* (suffix *namul* 3, 4, 22 sqq.; 6, 1, 193 and 6, 2, 139), *ánukṛta-* (suffix *kta*, 3, 4, 70 sqq. and 6, 2, 49; *karmaṇi!*), *durāgatá-* (6, 2, 144; *kartari!*).

§§ 47—49. The cross-references between the *ku-gati*-passage and the 3d adhyāya. Sū. 2, 2, 19—22 interpreted.

§ 47. Usefulness of a table of cross-references.

The sūtras 2, 2, 19—22 are so interwoven with the third adhyāya that a close comparison is necessary for their interpretation, and it is this peculiarity of composition which makes it probable that the Aṣṭādhyāyī was discussed by the aid of manuscripts between master and pupils before the texts were committed to memory, for only such a debate²⁾ could make the memorisation attractive and adequate for its purpost.

Note. Abbreviations in the table. — Pos. = positively, neg. = negatively, dir. = directly; the divisions Ca etc. refer to § 35.

§ 48. Table of cross-references of 2, 2, 19—22 to the 3d adhyāya.

- | | | | | | |
|-----|--------|-------------|--------------------|-------|---|
| (1) | Sū. 19 | refers pos. | to Ca | = | SP. 3, 1, 95—3, 3, 130 (exc. <i>prās. sū.</i>) |
| (2) | " " | " neg. | to <i>prā-</i> | | |
| | | | <i>saṅgika-sū.</i> | of Ca | = " 3, 2, 110—122; 123 etc. |
| (3) | No sū. | refers dir. | to Cb | = | " 3, 3, 131—3, 4, 8 |
| | | | nor to Cc 1—3 | = | " 3, 4, 9—24 |
| (4) | Sū. 20 | refers pos. | to Cc 4α | = | " 3, 4, 25—46 |
| (5) | Sū. 21 | " " | " Cc 4β | | |
| | | | and Cc 5 | = | " 3, 4, 47—64 |
| (6) | Sū. 22 | " " | to Cc 5 | = | " 3, 4, 59—64 |
| (7) | No sū. | " dir. | to Cc 6 | = | " 3, 4, 65—66. |

§ 49. Discussion of the separate sūtras 2, 2, 19—22.

(1) Sū. 19, *upapadam atin*. Positive part: an *upapada* (that is a noun-stem in *kāraka*-relation, or an indeclinable either as prefix or in adverbial relation) is regularly (*nityam*) compounded with a following declinable in

¹⁾ Böhrtlingk is wrong in leaving out examples of this kind.

²⁾ On the discussions between colleague grammarians see Weber, Ind. Studien, XIII p. 406, 'Man zankte sich zu Zeiten unter einander recht kräftiglich'.

all those cases mentioned in the first part of the *upapada*-section which bears upon the case (3, 1, 95—3, 3, 130 after subtraction of the *prāsaṅgika*-rules), for there can be no question of a *taddhita* as second member, this subject having been fully treated in the preceding section (2 pā. 1 sū. 22—2 pā. 2 sū. 18 inclusive) nor of indeclinable *kṛts* because of the *vipratishedha* in the following sūtra ¹⁾, which gives rules for the only possible indeclinables, the *ktvā*- and *am*-absolutives. Examples: *prastha* 3, 1, 136; *kumbha-kāra* 3, 2, 1; *agniṣṭoma-yājīn* 3, 2, 85; *saṃparkin* 3, 2, 142; *idhma-pravraścana*, 3, 3, 117 (cf. *karmaṇi* in 116); *iṣat-kara* 3, 3, 126.

(2) Sū. 19, negative part: a finite verb (as 'logical' *upapada* § 34 in fine) is never compounded with its following *pradhāna*: *vrājati bhójakaḥ* 3, 3, 10; *vrājati pākāya* 3, 3, 11.

(3) No sū. refers to Cb and similar *prāsaṅgika-sūtras* in Ca, as follows from the argumentation given in § 45. Examples: *kṣiprām ā gamiṣyati* 3, 3, 133 (Cb) and *iti ha cakāra* 3, 2, 116 (Ca). — Neither does any sūtra positively refer to Cc 1—3, although negatively some of the cases fall under sū. 2, 2, 19 sqq. If in the Vedic idiom *śaknoti* should be followed by *apalupam* no compound could arise according to sū. 19 (SP. 3, 4, 12), neither could any Vedic infinitive in *-se*, *-ase* etc. (SP. 3, 4, 9 sqq.) form a compound with a preceding (logical) *upapada* according to sū. 20 and 22. Whereas *alam karoti* forms its absolute as *alam-kṛtya* according to 2, 2, 18 (§ 46), on the other hand *alam kṛtvā* synonymous with *khālu kṛtvā* (SP. 3, 4, 18) remains un-compounded and does not follow 2, 2, 22, in which sūtra the *tṛtīyā-prabhṛtini* are mentioned, i.e. a cross-reference is given to 3, 4, 47 (§ 35 and § 48 Cc 4β). Sūtras 3, 4, 20—22 do not mention *upapadas*; sū. 23 bears on the construction of *yad* with a finite verb, which, too, does not allow composition (§ 45); *āgre bhōjam vrajati* and similar cases mentioned in 3, 4, 24 would according to algebraic interpretation fall under 2, 2, 20, but since the synonymous expression *āgre bhuktvā* falls negatively under 2, 2, 21, sū. 3, 4, 24 being mentioned before 3, 4, 47, it is evidently the sūtrakṛt's intention to make sū. 20 exclusively bear on sū. 3, 4, 25 sqq. (§ 48 Cc 4α).

(4) Sū. 20, *amaivāvyayena*: [an *upapada*, cf. sū. 19] is only then [regularly compounded, cf. sū. 17] with an indeclinable if this be an absolute ending in *-am*. The positive cases are summed up in Cc 4α: *coraṃkāram ā krośati* 3, 4, 25; *tathā-kāram bhokṣye* etc. By the following sūtra ²⁾ the field of strict applicability is limited to sū. 3, 4, 46 as terminus ad quem.

(5) Sū. 21, *tṛtīyā-prabhṛtīny anyatarasyām*, if loosened from its connexion with adhy. 3, Cc 4β and Cc 5 = SP. 3, 4, 47—64, would become quite unintelligible, for *tṛtīyā-prabhṛtini* cannot mean the third noun-case, the fourth etc., but refers to the *upapadas* mentioned in the passage 3, 4, 47 sqq. Examples of facultative composition: *mūlakenopadāṃśam* and

¹⁾ The relation between sū. 19 and 20 is an instance of sū. 1, 4, 2. Cf. § 30.

²⁾ Cf. the *adhikāra-sūtra* 1, 4, 2.

mūlakopadāṃśaṃ bhuṅkte (3, 4, 47), *vrajā uparódhaṇi*, and, *vrajoparódhaṃ gāḥ sthāpayati* (49); *ākṣi nikāṇaṃ*, and, *akṣi-nikāṇaṃ jalpati* (54), *nīcāiḥ kārāṃ*, and, *nīcāiḥ-kārāṃ ā cakṣe* (59).

(6) Sū. 22, *ktvā ca* = [*tṛtīyā-prabhṛtiny upapadāny anyatarasyāṃ saha*] *ktvā ca*. *Tṛtīyā-prabhṛtini* refers to 3, 4, 47 sqq., but since the absolutive in *ktvā* construed with an *upapada* is not mentioned before 3, 4, 59, this facultative rule really bears on 3, 4, 59—64 (§ 48, Cc 5). Example: *nīcāiḥ kṛtvācakṣe* and *nīcāiḥ-kṛtyācakṣe* (59).

7) Absence of sūtras referring to 3, 4, 65 sq. Syntactical constructions with a 'logical' *upapada* as *śaknoti kártum*, *ālaṃ kártum* are never compounded according to 2, 2, 18—22, mentioning *-am* and *-ktvā* as the only indeclinable *kṛts* of the *upapada*-section (3, 1, 95—3, 4, 102) fit to become a second member of a compound. — On the other hand *gatis* as *upapadas* are regularly compounded with infinitives and adsolutives of all kinds according to sū. 2, 2, 18, for the rules of sū. 20—22 only refer to the *upapadas* of the corresponding passage in the third adhyāya.

By observing thus the strict parallelism between SP. 2, 2, 18—22 and the 3rd adhyāya the former passage becomes perfectly clear, and not the slightest blame can be attached to Pāṇini's technical expression, the only implicit admission being that sū. 18 supersedes both the *sup*s of the general *adhikāra*: '*sup saha supā samāsaḥ*'.

§§ 50—56. The *Mahābhāṣya* on the *ku-gati*-passage.

§ 50. Hindu and European mentality. The *Mahābhāṣya* and its comments on SP. 2, 2, 18 sqq.

In the preceding pages the research was prompted by the wish to get an insight into Pāṇini's peculiar genius and his methods and mannerisms of composition, to understand the differences between Hindu and European mentality based as the latter is on ancient Hellenism. The aim of the ancient Hindu commentators, on the other hand, was to understand the laws of their language, Pāṇini's composition-form being still their own manner of expression. They correct, give examples and additions, but on the other hand rarely analyse the text in the way of a European philologist.

In view of a comparison which may be desirable between the explanation given above and Patañjali's commentary the main points of his reasoning are summarised in the following pages, where prominence is given to those passages which support or seem to contradict the above argumentation.

§ 51. Sūtra 2, 2, 18, *vārttikas* 1, 3, and 4, and a part of Patañjali's addition.

Vārtt. 1, *prādi-prasaṅge karmapravacaniya-pratiṣedhaḥ*, 'on occasion of the *prādayaḥ* being discussed it is said that the *karma-pravacaniyas* are excluded [from the discussion]'. Cf. SP. 1, 4, 83—98 and 2, 1, 5—21. One of the examples of the *Bhāṣya*: *vṛkṣaṃ prati vidyotate vidyut*.

Vārtt. 3, *siddhaṃ tu kv-ān-sv-ati-dur-gati-vacanāt*, 'but [the rule is]

correct, since [instances can be] mentioned for *ku* and the *gatis ā, su, ati, dus*'. [One of the examples]: *ku-brāhmaṇaḥ*.

Vārtt. 4, *prādayaḥ ktārthe*, 'pra etc., when implying the meaning of a participle in *ktā*'. *pragata ācāryaḥ* = *prācāryaḥ*. — Page 416 l. 15 sqq., quotation from the school of the Saunāgas on the subject.

Addition by Patañjali (p. 417 l. 3), *avyayaṃ pravṛddhādibhiḥ samasyate ... punaḥ-pravṛddhaṃ, bahir-bhavati* etc.

§ 52. Proclitics and enclitics called members of compounds by Patañjali [against Pāṇini's terminology], p. 417 l. 4, sub SP. 2, 2, 18.

Ivena vibhakty-alopaḥ pūrvapada-prakṛti-svaratvaṃ ca: vāsasī iva, kanyē iva. Pāṇini only discusses the enclitic use of *iva* after a verb (8, 1, 57 sqq.).

*Udāttavatā tiṇā gatimatā cāvyayaṃ samasyata iti vaktavyam: anuvyācalat, anuprāviśat, yat-pariyānti*¹); the rules bearing on this case are given SP. 8 pā. 1. The terminology of the two grammarians is different, the linguistic facts to which they refer are the same.

§ 53. Sūtra 2, 2, 19, vārtt. 1—4.

Vārtt. 1 and 2, 'upapadam atin'-iti tadartha-pratiṣedhaḥ? kriyā-pratiṣedho vā? (cf. SP. 3, 3, 10 and § 49 no. 2).

(Patañjali's comments), MBh. I p. 417 l. 12 *tadarthasya ... — Kasya? — tiṇ-arthasya*, and l. 15 *athavā vyaktam evedaṃ paṭhitavyam 'upapadam akriyā' iti. — Athākriyete kiṃ praty udāhriyate? — kārako gataḥ, hārako gataḥ. — Naitat kriyāvāci. — Kiṃ tarhi? — Dravya-vāci*.

Since not only *vrajati kārakaḥ*, but also *gataḥ kārakaḥ* cannot be compounded, sū. 19, algebraically interpreted, is not quite correct; this is the starting-point for the commentator's reflections.

Vārtt. 3 and 4, *ṣaṣṭhi-samāsād upapada-samāso vipratishedhena; na vā, ṣaṣṭhi-samāsasyābhāvād upapada-samāsaḥ*.

The vārttikas and Patañjali's comments discuss the relation between 2, 2, 8—17 and 18—22, especially sū. 19. *Rāja-puruṣa* is evidently a *ṣaṣṭhi-samāsa* and *stambe-rama* (cf. 3, 2, 13 with *supy upapade* as supplements from 3, 2, 4 and 3, 1, 92; and see 6, 3, 14) an *upapada-samāsa*; but both terms would be applicable in a case as *kumbha-kāra*, (for genitive-relation see 2, 3, 65 and 2, 2, 16, and for *upapada*-relation 3, 2, 1). Thus the vārttika-kārin considers whether the difficulty could be solved with the *vipratishedha-paribhāṣā* (1, 4, 2) etc.

§ 54. Both the *sup*s of the *adhikāra* 'sup saha supā samāsaḥ' are superseded in the passage 2, 2, 18 sqq. according to Patañjali (cf. § 45).

MBh. p. 417 l. 18 (comm. to SP. 2, 2, 19 vārtt. 2): *evaṃ tarhi siddhe*

¹) Yat proclitic?!

sati, yad 'atīṇ' iti pratiṣedham śāsti, taj jñāpayaty ācāryo 'nayoṛ yogayoṛ (18 sq.) *nivṛttam sup supeti ... Yady etaj jñāpyate kenedāṇiṃ samāso bhaviṣyati? Samarthena* (SP. 2, 1, 1 and § 31 in fine).

§ 55. The interpretation of *eva* in 2, 2, 20.

MBh. p. 418 l. 19. *Idam tarhi prayojanam: amaiva yat tulya-vidhānam upapadam*¹⁾, *tatraiva yathā syād; amā cānyena ca yat tulya-vidhānam upapadam*²⁾, *tatra mā bhūd iti: agre bhojam, agre bhuktvā*.

Note. Criticism on Patañjali's interpretation of 2, 2, 20. — In this passage *tulya-vidhānam* is a *bahuvrīhi* and *amaiva* is dependent on its first member *tulya*, the formula *amaiva yat tulya-vidhānam upapadam* refers to SP. 3, 4, 25—58, where syntactical rules for the exclusive use of the *am*-absolute are given; an *upapada* (he says) can only be compounded with an indeclinable *am*-absolute that in its syntactical context does not permit the competing of a *ktvā*-absolute, and the composition is obligatory (*nityam*); or in other words: an *upapada* can only be compounded with an absolute which according to syntactical conditions may only have the *am*-form, and then etc. Patañjali's sophistry consists in the double function attributed here to the limitative particle 'only', *amaiva yat ... tatraiva*. In the same way, as it seems, the commentators explain *samarthaḥ padavidhiḥ* (SP. 2, 1, 1; cf. § 31) by *samarthānām padānām vidhiḥ samarthaḥ*; but really the cases are not the same; in 2, 1, 1 the commentators attribute a stylistic figure to Pāṇini; in 2, 2, 20 Patañjali distorts the text.

§ 56. The form of scientific thought of Pāṇini and his commentators.

In Kātyāyana and Patañjali we can already recognise the technical reasoning, the dialectics of the Pūrva-Mimāṃsā and the philosophical schools, where the doubts and difficulties are formulated as dilemmas and where the solution of one dilemma starts the formulation of a new dilemma and so on in a long stream of debate, and where even the accuracy of expression seems to acquire mathematical exactness. Yet however interesting this form of scientific expression may be in the history of Hindu thought, we should go astray in attributing this pseudo-algebra and dialectics to Pāṇini and his contemporaries. But being on our guard against such false surmise we can learn much from these commentators, for how fully they have shown in this passage their grasp of the narrow relation between the *ku-gati*-passage and the third adhyāya, a point where even Böhtlingk has fallen short.

¹⁾ SP. 3, 4, 25—58; cf. § 35, C c 4.

²⁾ According to examples given the commentator means: SP. 3, 4, 24. Although Patañjali is right in subtracting this sūtra from the influence of 2, 2, 20, his method is far removed from modern philology. Cf. § 49 no. 3 in fine.

§§ 57—60. Morphological and phonological consequences of the *ku-gati*-passage.

§ 57. Morphological consequence of SP. 2, 2, sū. 18 and 22. See SP. 7, 1, 37.

SP. 7, 1, 37, 'samāse 'nañpūrve ktvo lyap', where the Kāśikā comments: *samāse 'nañ-pūrve ktvā ity etasya lyab ity ayam ādeśo bhavati*.

Examples of the Kāśikā: compounds with a *gati* according to 2, 2, 18: *pra-kṛtya*, *pra-hṛtya* (SP. 1, 4, 60); with an *upapada* according to SP. 2, 2, 22 in connexion with 3, 4, 59—64 (§ 35, Cc 5, and § 49 no. 6): *pārśvataḥ-kṛtya*, 3, 4, 61; *nānā-kṛtya* and *dvidhā-kṛtya*, 3, 4, 62.

For the indeclinable of negation and disapproval *nañ* (with the forms *a-*, *na* and *an*, SP. 6, 3, 73—77) see the commentators.

§ 58. Phonological consequence of the *ku-gati*-passage: the *prakṛti*-accentuation of the first member of a compound, Sū. 6, 2, 49—53.

Sū. 6, 2, 49, *gatiḥ anantaraḥ*¹⁾ [*udāttaḥ* 6, 1, 159; *tatpuruṣe* 6, 2, 2, cf. § 33, *-kte*, 6, 2, 45; *karmaṇi*²⁾ 6, 2, 48, — and with regard to a bisyllabic *gati*, 6, 2, 1 *prakṛtyā pūrvapadam*, the *adhikāra* of the section to which the *sūtra* belongs]. 'A *gati*, but only the last before the *kṛt*, is normally accentuated in a *tatpuruṣa* when a *kta*-participle expressing the grammatical object (= which has passive meaning) functions as second member'.

Although the Kāśikā only mentions examples with the *prādayaḥ*: *prākṛta*, *prāhṛta*, *abhyūddhṛta*, the rule is general, e.g. *ālamkṛta*³⁾ (1, 4, 64).

The Kāśikā adds the note *thāthādi-svarāpavādo yogaḥ*, 'the rule is an exception to sū. 6, 2, 144'; i.e. the two rules cross each other, an active participle in *-ta* with prefix is according to 6, 2, 144 oxytonon; example: *durād-āgatāḥ*.

For the interpretation of *sūtras* 50—53 see Böhtlingk. The examples borrowed from the Kāśikā for sū. 50 are again too limited in character, cf. *āviṣ-kartum* (SP. 1, 4, 61; GP. 31 no. 37). In sū. 6, 2, 52 *añcatau* is the locative of the finite verb *añcati* representing the root *añc*, which is used as a *kṛt* according to SP. 3, 2, 59; § 35, Ca 2a.

§ 59. Phonological consequence of the *ku-gati*-passage: the *prakṛti*-accentuation of the second member of a compound. Sū. 6, 2, 139.

Sū. 6, 2, 139, *gati-kāraḥ upapadāt kṛt* [*prakṛtyā*, 6, 2, 137; *udāttaḥ*,

¹⁾ One would expect *anantarā*.

²⁾ Cf. § 23.

³⁾ Wackernagel II p. 226, § 93 b.

⁴⁾ Wackernagel does not mention this case, II p. 226, § 93 a.

6, 1, 159]. The sūtra evidently refers in its redaction to the *ku-gati*-passage and consequently the term *upapada* refers likewise to the *upapada*-section of the third adhyāya. The term *ku*, found in 2, 2, 18 has been left out in 6, 2, 139, because in the *ku-gati*-passage *ku* only refers to compounds such as *ku-puruṣa*, where the second member is a noun. Had Pāṇini paid particular attention to a compound such as *ku-carā-*, he would have done so in sū. 3, 2, 17 (cf. e.g. *puraḥ-sarā-* in 3, 2, 18). And the term *prādayaḥ* of 2, 2, 18 has been left out, because only the *prādayaḥ* with *gati*-character are here considered. Although in the *upapada*-section the *kāraka-upapadas* are discussed together with the *avyaya-upapadas* (cf. 3, 2, 1 *karmaṇi*, 4 *supi*, 15 *adhikaraṇe* etc. and on the other hand: 61 *upasarge 'pi*, and 3, 3, 126 *iṣad-duḥ-suṣu*), yet the term *kāraka* is added here for clearness, as *upapada* by itself would be too wide (cf. § 34) and would not refer distinctly enough to the third adhyāya. The interpretation thus runs: 'a compound containing a *kṛt* as its second member is accentuated on this member *prakṛtyā*, if (1) a *gati*, (2) an [*upapada* expressing a] *kāraka*-relation or (3) [any other] *upapada* [discussed in the 3d adhyāya] precedes'.

Examples: *prakāraka* (2, 2, 18), *idhma-pravrāścana* (2, 2, 19 and 3, 3, 117), *iṣat-kāra* (2, 2, 19, and 3, 3, 126).

§ 60. Phonological consequence of the *ku-gati*-passage: shifting of the *udātta* to the last syllable of the compound. Sū. 6, 2, 144—151.

Sū. 6, 2, 144, shifting of the accent to the last syllable takes place when a *kṛt* ending in one of the suffixes (1) *-tha*, (2) *-atha*, (3) *-gh(a)ñ*, (4) *-k(ta)*, (5) *-(a)c*, (6) *-(a)p*, (7) *-itra*, (8) *-k(a)* is preceded by a *gati*, a *kāraka*-[*upapada*] or any [other] *upapada*, cf. 6, 2, 139, § 59.

Examples with a *gati*, i.a. (4) *viśuṣkā* (still considered according to Pāṇini's method of grammatical fiction to be **-śuṣ-tā*, cf. SP. 8, 2, 51), the word is oxytonon, because the *kta*-participle here expresses the *kartar* and not the *karman*, cf. 6, 2, 49 and § 58; (8) *pra-vṛṣā*¹⁾, the root *vṛṣ* is here applied to the male animal and the suffix *k(a)* expresses the *kartar* (SP. 3, 1, 135; 3, 4, 67, and § 35, Ca 2a).

Examples with a [*kāraka*]-*upapada*, i.a. (3) *kāṣṭha-bhedā* (name of an instrument, 3, 3, 121, cf. 3, 3, 117 and Kāśikā on sū. 121; § 35, Ca 2c; (8) *go-vṛṣā*, *kharivṛṣā*¹⁾).

For sū. 145—151 see Böhtlingk.

¹⁾ Liebich, Zwei Kapitel etc., p. XXVIII: Um so dankbarer werden wir Pāṇini sein, dass er es nicht verschmäht hat, auch solche Worte uns aufzubewahren, die er nicht in Texten ... fand, sondern bei den Hirten auf dem Felde oder selbst bei den Würfelspielern in der Schenke. — The people themselves, however, used these words in a Prākṛit form, cf. Sköld, Nirukta, p. 133!

IV. GATI AND NIPĀTA, OR THE CLOSE ADVERBS OF THE FINITE VERB
AND THE MODAL AND CONJUNCTIONAL PARTICLES.

§§ 61—68. Analytical table of adhy. 8 pā. 1. Worth of Pāṇini's work.

§ 61. The theory of the close adverbs and the modal and conjunctional particles, SP. 8 pā. 1.

The theory of the *gatis* as close adverbs and the *nipātas* is given by Pāṇini in connexion with the theory of enclisis and proclisis. In the notes to the following analytical table of adhy. 8 pā. 1 references are given to Whitney's article of 1856 ('Bopp's Comparative Accentuation of the Greek and Sanskrit Languages') and the chapter 'Betonung der Satztheile' in Delbrück's 'Altindische Syntax'.

§ 62. Analytical table of adhy. 8 pā. 1.

| Divis. | sūtra | Subject of adh. 8 pā. 1. |
|-------------|----------------------|--|
| A | 1—15 | <i>Amredita</i> Word-repetition and its accentuation; <i>bahuvrīhis</i> and <i>karmadhārayas</i> formed by repetition. |
| B adhik. | 16—18 | <i>Anudāttatva</i> of words in the sentence General adhikāra of the pāda: every [syllable] of a word <i>anudātta</i> ; conditions required: 1. not placed at the beginning of a verse-line; 2. placed after another word (exceptions sū. 69 sqq.). Note. <i>Padād</i> = <i>nāvasānād</i> : an enclitic word cannot come immediately after a phonetical stop. From this follows that 'the verb is always accented if it stand at the head of its own particular clause in the sentence' (Whitney p. 216 l. 17). |
| Ba | 19 | Vocative, (Wh. p. 214). |
| Bb | 20—23 24—25 26 | Personal pronouns. Positive sūtras: the enclitic forms. Negative sūtras: the accented forms obligatory before <i>ca</i> , <i>vā</i> , <i>ha</i> , <i>aha</i> , <i>eva</i> . Facultative rule. |
| Bc | 27 | Particles of blame and [painful] repetition (GP. 78) after finite verb. |

| Divis. | sūtra | Subject of adh. 8 pā. 1. |
|-----------------|-------|--|
| Bd | | Finite verb |
| „ 1 | 28 | Main rule: [<i>padād</i> = <i>nāvasānād</i>] <i>anudātta</i> |
| „ 2 | | Exceptions: accented are |
| „ 2 α | | a finite verb after a finite verb (Wh. p. 217; D. § 23, 1), |
| „ 2 β | 29 | a periphrastic future (D. p. 35 note 1), |
| „ 2 γ | 30—50 | a finite verb 'combined' (<i>yukta</i>) with certain <i>nipātas</i> ; these are partly conjunctions (Wh. p. 215 l. 13, D. § 27), partly modal particles of emotion. Often the meaning is added. 30. <i>yad</i> , <i>yadi</i> etc.; 31—35. <i>naha</i> , <i>satyam</i> , <i>aṅga</i> , <i>hi</i> . 36—38. <i>yāvad</i> , <i>yathā</i> ; when accented and when enclitic (cf. § 66). 39—43. <i>tu</i> , <i>paśya</i> , <i>paśyata</i> , <i>aha</i> , <i>aho</i> ; <i>purā</i> ; <i>na nu</i> . 44—45. <i>kim</i> ; for influence of <i>upasarga</i> see § 66. 46. <i>ehi manye</i> . 47—50. after <i>jātu</i> , indefinite pronoun (<i>kaś cid</i> etc. heading the sentence; after <i>āho</i> , <i>utāho</i> heading the sentence when verb immediately follows; etc. (For a case of a similar kind with the <i>nipāta atho</i> see D. § 23, 3). |
| „ 2 δ | 51—54 | a <i>lṛṭ</i> , a <i>loṭ</i> in a second sentence, certain conditions being fulfilled; and <i>loṭ</i> after <i>hanta</i> (D. § 26); for influence of preceding <i>upasarga</i> see § 66. |
| Ba! | 55 | Vocative. In combination: <i>ām</i> + finite verb + vocative, in calling from distance vocative accented. |
| Bd 2 ϵ | 56—58 | Accented moreover are: a finite verb, followed by <i>yad</i> , <i>hi</i> , <i>tu</i> in Veda; a finite verb, followed by <i>cana</i> , <i>cit</i> , <i>iva</i> (for a case of a similar kind with the <i>nipāta id</i> see D. § 24), a particle of blame or [painful] repetition, the verbal <i>taddhitas</i> of degree etc., the same finite verb repeated; and before <i>ca</i> , <i>vā</i> , <i>ha</i> , <i>aha</i> , <i>eva</i> (D. § 27). For the influence of a preceding <i>gati</i> see § 66; |
| „ 2 ζ | 59—62 | a finite verb, combined with (<i>yukta</i>) <i>ca</i> , <i>vā</i> , <i>ha</i> (' <i>kṣiyāyām</i> '), and <i>aha</i> (' <i>kṣiyāyām</i> ' and ' <i>vinīyoge</i> ') — or without <i>ca</i> or <i>ha</i> , but combined with <i>eva</i> — in the first of two coordinate sentences (D. § 25); |
| | 63—65 | facultative rules bearing on the verb of the first of two coordinate sentences (D. p. 41); |
| Bd 2 η | 66 | after a form or derivative of the [stem of the] relative pronoun (cf. sū. 30—50). |

| Divis. | sūtra | Subject of adh. 8 pā. 1. |
|--------------|-------|--|
| <i>prās.</i> | 67 | <i>Prāsaṅgika</i> -rule. Noun as second member of compound, <i>anudātta</i> after words of praise. |
| Be | 68—69 | Finite verb, and the group close adverb with verb, <i>anudātta</i> after words of praise and before certain words of blame. |
| Bf | 70—71 | Close adverbs when <i>udātta</i> or <i>anudātta</i> in dependence on following close adverb or on the accent of the verb (D. § 28). |
| Bg | 72—74 | Words following a vocative; vocative as apposition of vocative. (The rules follow from the principle <i>padād</i> [= <i>nāvasānād</i>], cf. Wh. p. 217 last paragraph). |

§ 63. Pāṇini and Delbrück compared.

What is it that strikes us most in Pāṇini, the ancient pioneer of grammar and auditive witness of the linguistic facts, when we compare him with Delbrück, investigator trained by modern methods of research and a great reader of literary documents? What strikes us then, when taking account of difference and agreement, is the trustworthiness of Pāṇini, his power of observation, his love of language, his deep intellectual and emotional understanding.

§ 64. Why is the *adhikāratva* of sūtra 8, 1, 17 limited by the commentators to 8, 1, 68 included?

The Kāśikā annotates sū. 8, 1, 17 by the words *padād ity ayam adhikārah prāk 'kutsane ca supy agotrāda'*, which is right since sūtra 69 contains an exception to the condition required by the *adhikāra* and the following sūtras 70 sqq. are not directly connected with the *adhikāra* itself, but must be read in connexion with special rules of the section Ba sqq. (see e.g. the examples given by Böhtlingk and in the Kāśikā to sū. 72).

§ 65. The composition of adhy. 8 pā. 1.

The synoptical table of § 62 shows us that the construction of the pāda is based in the first place on logical principles, the main division being A. *āmredita* and its accent, and B. the sentence-accent, which latter subject is divided into the vocative and cognate facts, the personal pronoun, and the finite verb in connexion with prefixes and particles.

Peculiar is the distribution of the rules concerning the vocative: Ba (sū. 19), Ba (sū. 55) and Bg (sū. 72—74) ¹⁾. It seems that Pāṇini has used these rules and likewise the rule on the particles of blame (Bc, sū. 27) and the *prāsaṅika*-rule on nominal compounds (sū. 67) as a means for articulating the principal discussion of the verb (Bd 1—2δ, 2ε—2η, Be—f).

§ 66. The rules of the sections Be and Bf symbolically expressed.

In order to symbolise the rules of sū. 68—69 and 70—71 the following symbols are accepted: *pūj* = accentuated expression of *pūjā*; *kúts* = accentuated expression of *kutsana*; *gá* and *ga* = accentuated and unaccentuated *gati*; *tīñ* and *tiñ* = the stressed and enclitic form of the finite verb. The symbolic expressions are then

sū. 68—69 *pūj* (*ga*) *tīñ* (1)

(*ga*) *tīñ* *kúts* (exc.: sū. 27) (2)

sū. 70—71 to single *tīñ* corresponds (*ga*) *gá* *tīñ* (3)

„ „ *tīñ* „ (*ga*) *ga* *tīñ* (4)

However, in some cases rule (4) does not hold good and is replaced by the subsidiary rule:

to single *tīñ* corresponds (*ga*) *gá* *tīñ* (5)

For this shifting of accent see sū. 38, 44, 53, 57 sq.

§ 67. The terms *gati* and *upasarga* in adhy. 8 pā. 1.

The term *upasarga* is met with in sū. 38, 44 and 53, the term *gati* in 57, 68 and 70; the reader gets the impression of there being scarcely any difference.

§ 68. Worth of Pāṇini's work.

The worth of Pāṇini's work for us is not in its linguistic information, however valuable many a detail may be, but in its fitness as a training for our understanding the Indian methods of composition; and specially as a scientific work it offers in this respect great advantages. When thirty years ago I was writing my first book of research devoted to Śaṅkara's *Gītā-bhāṣya* the critical and sarcastic remarks made on the *Bhagavad-gītā* by Böhtlingk and Hopkins appealed more to me than now owing to insufficient insight in the synthetic procedures of the Hindu mind. The foregoing pages have touched this subject incidentally; the second part of this article will be entirely given to it.

¹⁾ For the vocative cf. SP. 2, 1, 2 and 6, 1, 198.

II. THE METHODS AND MANNERISMS OF COMPOSITION IN PĀṆINI'S AṢṬADHYĀYI.

§§ 69—93. The fundamental notions of Hindu grammar. Main and subsidiary principles of Pāṇini's form of composition. Tendency towards dichotomy in the main divisions.

§ 69. The Hindu and European science of grammar. Hindu grammar differs from its European sister-science partly by its fundamental notions, partly by its literary composition and its form of description, of which the algebraic anubandha-system and further mnemotechnical means such as the use of *adhikāras* and in general of *anuvṛtti* in a continuous series of *sūtras* form characteristic features.

Whereas European grammar in its traditional form is based on two sets of notions, the notions bearing on sentence-analysis such as subject, predicate, object, etc. and the notions of the parts of speech, substantives, adjectives, etc., Hindu grammar is in this respect rather undeveloped, operating on the one hand with notions that lack systematisation such as *upapada*, *kāraka*, *samānādhikaraṇatva*, *viśeṣaṇa* and dividing on the other hand the words into two wide categories: A. *atiṇ* (either used as a complete word or as first member of a compound) and B. *tiṇ* (the finite verb), and subdividing the former category into Aa *sup*, declined word, corresponding to the European notions of substantive, adjective, pronoun and numeral, and Ab *avyaya*, containing not only the particles, conjunctions, adverbs, prefixes but also the deverbative indeclinables i.e. the absolutives and infinitives.

In the first part of these studies all these notions have been amply explained and examined; the following pages deal with the form of literary composition.

Note. The cardinal numerals as declinables. — Whereas in the European languages the cardinals with a few exceptions are indeclinable, they were in Sanskrit all subjected to declension, a linguistic feature which gives Pāṇini's simple classification a peculiar fitness for the language which he describes.

§ 70. Main principles of Pāṇini's forms of literary composition: mnemotechnical economy, logical division and associative digression.

These principles may be considered to be primary in Pāṇini's technique of composition: (1) mnemotechnical economy, (2) logical division, and (3) associative digression (*prāsaṅgika*).

What strikes the European student most in reading Pāṇini is the prevalence given to the first principle above the demands of logical division. A typical example of this characteristic has been met with in the term *pada*, defined in such a way that a combined treatment of sentence-coalescence and consonantal assimilation within the word becomes possible ¹⁾.

The associative digression, which often interferes with the logic of division, can be either due to what precedes or to what follows, or it arises from the wish to link together two logically divided subjects. Sometimes, moreover, a section is not limited to the subject expected by the reader according to the context, but at the same time deals with subjects which in the author's mind are coherent with it.

As an example of preceding digression may be mentioned sū. 2, 1, 2, for whilst adhy. 2 pā. 1 and 2 treat in general of the compound, the sūtra mentioned gives the rule that a noun-case dependent on a following vocative is considered with reference to accent to be as it were one word with this vocative.

As an example of following digression may be quoted 8, 4, 57, where unexpectedly a rule is given for final vowel in a context dealing with final consonants, mainly because of the anuvṛtti of *vāvasāne* which thus could be used.

The instances of concatenative digression are very numerous; see for instance passage 4, 1, 77—81, which forms part both of the section on grammatical motion and of the section on denominative noun-derivation.

As an example of too wide discussion may be quoted 1, 3, 2—9, for, whilst the introductory sū. 1, 3, 1 *dhātavaḥ* and the total discussion of 1, 3, 12-*fin.* show that the main subject of the pāda is the verb and its active and middle voice, yet the sūtras 2—9 do not only give rules for the anubandhas of the Dhātupāṭha, but treat the anubandhas in general.

§ 71. Subsidiary forms of composition and arrangement: (1) *pūrvatrāsiddhatva*, (2) distinctive insertion, (3) oratorical division and (4) insertion by emergency.

The technical principle of arrangement called *pūrvatrāsiddhatva* is adopted in adhy. 8 pā. 2—4; see Buiskool's publication.

A very striking form of arrangement is the 'distinctive insertion', which, unexpectedly, introduces and leaves a subject foreign to the context, an illogical licence here and there made use of in order to mark the articulation of the composition; see for instance the definitions of *saṃhitā* and *avasāna* at the end of adhy. 1 pā. 4, and the peculiar way in which the rules for the vocative are distributed over adhy. 8 pā. 1 (sū. 19, 55 and 72—74) ²⁾.

¹⁾ See § 42 sq.

²⁾ See § 65.

Then, we may mention the author's inclination to announce in the last sūtra of a pāda, more or less directly, the subject of the following pāda (cf. 8, 2, 108, *saṃhitāyām*, and 6, 1, 223 [*antaḥ*] *saṃāsasya* [*udāttaḥ*]), the positive rule to which 6 pā. 2 gives the exceptions. Likewise we meet here and there with the opposite form of arrangement, when the author at the beginning of a pāda gives a few additions to the foregoing pāda (e.g. 3, 3, 1—2 and 3, 4, 1—8)¹). In all these cases one might think of oratorical devices for giving emphasis or rousing interest.

As a fourth subsidiary form of composition may be reckoned the 'insertion by emergency', in which case the author places, indifferent where, one or two sūtras which for some reason or other could not be placed in the context required by logic; e.g. the definition of *karma-dhāraya* is given in 1, 2, 42 instead of 2, 1, 49 (or after 2, 1, 23), to avoid the difficulties which would arise from sū. 1, 4, 1.

§ 72. The logical division showing a tendency towards dichotomy.

A fact of peculiar interest in Pāṇini's composition is the tendency towards dichotomy in the main divisions of his work. As this dichotomy repeats itself three times, the internal arrangement of the Aṣṭādhyāyī can be symbolised by the formula: IAa, IAb, IBa, IBb, IIAa, IIAb, IIBa, IIBb. The analytical table of § 73 makes this arrangement clear, whilst the following sections contain its full discussion.

Note. Abbreviations used in the table of § 73. — Acc. = accent, an. = analysis, art. = articulation, cj. = conjugation, cp. = composition of words, dc. = declension, dr. = derivation, i. = introduction, id. = indeclinable, mo. = morphology, ph. = phonology, tg. = technical-grammatical development.

§ 73. Concise analytical table of the Aṣṭādhyāyī.

| Divis. | adhy. | subj. | Summary of the Aṣṭādhyāyī. |
|--------|-------|-------|---|
| I | 1—5 | | Theory of the ultimate components of language, or the analytical part of grammar. |
| IA | 1—2 | | The fundamental notions of grammatical science. |
| IAa | 1 | | The notions bearing on phonology, word-classification, technical-grammatical development and the theory of function and form. |

¹) See § 35.

| Divis. | adhy. | subj. | Summary of the Aṣṭādhyāyī. |
|--------|---|---|---|
| | pā. 1//pā. 2 1 pā.: 1, 1—19 2, 1—40 1, 20—43 2, 42—46 1, 44— <i>fin.</i> 2, 47—73 pā. 3 pā.: 4, 3—20 4, 21—55 4, 56—98 4, 99—108 | ph. an. tg. dc. cj. dc. dr. dc. id. dc. cj. | The pādas 1 and 2 of adhy. 1 are in the beginning parallel and gradually diverge. The mutation of roots and stems; the anubandhas bearing on mutation, cf. §§ 77 sq. General analysis; the parts of speech and their characteristics (conjugation, declension, indeclinability; composition). Technical-grammatical development (<i>āgama</i> , <i>ādeśa</i> , <i>lopa</i>). Motion and declension. The plural formation as a kind of <i>lopa</i> (sū. 64 'eka-śeṣaḥ'). The <i>kāra</i> kas and <i>bhāva</i> expressed by the finite verb; the <i>abhiprāya</i> of the voices. The fundamental terms of flexional (esp. declinational) and derivational morphology; <i>pada-bha</i> -section; the numerical and <i>kāra</i> ka-relations of the noun, enumeration of the relational indeclinables, the term <i>vibhakti</i> (declinational and conjugational derivation). |
| IA b | 2 pā.: 1 and 2 pā.: 3 pā.: 4, 1—31 4, 35—57 4, 58—85 | cp. dc. cp. cj. cp. etc. | The theory of composition; indeclinability and declinability; relations between the members. The noun-cases as expressions of <i>kāra</i> ka-, <i>upapada</i> -, and <i>viśeṣaṇa</i> -relations. Number and gender of compounds. Heteroclitic systems of conjugation (<i>ādeśa</i> of <i>dhātu</i>). The theory of <i>luk</i> (<i>ślu</i>) with reference to composition, derivation, tense-formation, and the derivation of indeclinables. |
| IB | 3—5 | | The theory of derivation. |
| IB a | 3 | dr. cj. | Theory of deverbative derivation; derivation of secondary roots, formation of tense-stems; derivation from roots: declinable <i>kṛts</i> , <i>tiṇs</i> and indeclinable <i>kṛts</i> , conjugational <i>vibhaktis</i> . |

| Divis. | adhy. | subj. | Summary of the Aṣṭādhyāyī. |
|--------|--------------------------|------------|--|
| IBb | 4 and 5 | dc. dr. | Theory of denominative noun-derivation; declinational <i>vibhaktis</i> ; motion; morphology and semasiology of <i>taddhitas</i> : declinable <i>taddhitas</i> , indeclinable <i>taddhitas</i> , <i>samā-sānta</i> -suffixes. |
| II | 6—8 | ph. mo. | The theory of phonological and morphological coalescence, or the synthetic part of grammar. |
| IIA | 6—7 | | The theory of word-coalescence and vocalic <i>saṁdhi</i> in general. |
| | 6, 1, 1— 157 | i | Articulative-phonological and morphological processes defined in character but not defined with reference to 'place' (i.e. independently of <i>samāsa</i> , <i>aṅga</i> , <i>bha</i> or <i>pada</i>). |
| IIAa | 6, 1, 158— 6, 2, fin. | acc. | Theory of accent with reference to word and compound, [<i>asamastasya padasya</i> , 6, 1, 158- <i>fin.</i> , and] <i>samāsasya</i> , 6 pā. 2. Accent placed on stem or suffix, on first or second member of compound. |
| IIAb | 6, 3, 1— 7, 4, fin. | art. | Articulative-phonology and morphology of compounds and derivatives: 6, 3, 1—6, 3, <i>fin.</i> Compound; processes in the preceding member (<i>adhikāra</i> : <i>uttarapade</i> , cf. SP. 1, 1, 66), vowel-lengthening. 6, 4, 1—7, 4, <i>fin.</i> Derivation, the section 6, 4, 129—175 referring to <i>bha</i> -stems only. |
| IIB | 8 | ph. mo. | The theory of sentence-coalescence and of consonantal <i>saṁdhi</i> in general: ' <i>pada</i> '. |
| IIBa | 8 pā. 1 | acc. | Theory of sentence-accent: 8, 1, 1—15. The accent of <i>āmredita</i> . 8, 1, 16- <i>fin.</i> Accent of vocative, enclitic pronouns, finite verb, etc. |

| Divis. | adhy. | subj. | Summary of the Aṣṭādhyāyī. |
|--------|---------|-------|--|
| IIB b | pā. 2—4 | art. | Articulative-phonological sentence-coalescence. Changes in the <i>pada</i> and specially at the end of a <i>pada</i> (words in the sentence, and <i>pada</i> -stem before suffixes). <i>Samhitā</i> -processes in words and word-groups. Phonetical processes in consonant-groups. |

§ 74. The internal composition and exterior division compared in tabellic form.

| Divis. | adhy. | adhy. | adhy. | Divis. | adhy. | adhy. | adhy. |
|--------|-------|-------|-------|--------|-------|-------|-----------|
| I | 1—5 | | | II | 6—8 | | |
| IA | | 1—2 | | IIA | | 6—7 | |
| IAa | | | 1 | IIAa | | | 6 pā. 1—2 |
| IAb | | | 2 | IIBa | | | 6,3—7,4 |
| IB | | 3—5 | | IIB | | 8 | |
| IBa | | | 3 | IIBa | | | 8 pā. 1 |
| IBb | | | 4—5 | IIBb | | | 8 pā. 2—4 |

§ 75. Method of research with reference to the adhyāyas 1 and 2.

Before determining the place of the adhyāyas 1 and 2 in the plan of the composition of the total work it is desirable and even necessary to analyse these adhyāyas internally, since their construction offers great difficulties and many an opportunity for testing the general principles formulated in the sections 70 sq. In this analysis (§ 76 sqq.) main groups and sub-groups are distinguished, the contents, if necessary, commented upon, and notes on the function in the composition added. Preliminarily to a subsequent summary we may say that this function can be of three kinds: (1) the passage treats of a general subject, giving for instance the definition of a fundamental grammatical notion, (2) it has the character of a bridge between a sūtra or series of sūtras found in the adhyāyas 3—5 (indicated in agreement with § 73 sq. as 'div. I B') and a sūtra or passage in adhy. 6—8 (= 'div. II'), or (3) it has a more independent character, in so far as the discussion forms a unity in itself and may be compared to similar discussions in div. I B. Numerous and important sections of the last kind will prove the adhyāyas 1—2 to be coordinate with the adhyāyas 3—5.

§ 76. Liebich's hypothesis as to the original beginning of the Sūtra-Pāṭha.

The often repeated, but rather superficial comparison of Pāṇini's method of theoretical development to a 'classical chemical experiment' has misled

Liebich to surmise that the sūtra 'dhātoḥ' (3, 1, 91) was the original beginning of the total work. The fact that sū. 2, 2, 18—22 is so closely interwoven with the 3d adhyāya that the former passage could not be understood without the latter, and the latter, if read without the former, would miss the bridge leading up to its effects as described in div. II¹⁾, is already sufficient to prove Liebich's hypothesis to be erroneous.

§ 77. Analysis of adhy. 1 pā. 1.

1, 1, 1—19. The mutation of roots and stems. Sū. 1—6, *guṇa* and *vṛddhi*; the anubandhas (sū. 5) *k* and *ñ* forbidding any strengthening of roots (cf. sū. 4) in deverbative formations; the passage has often a bridge-character; e.g. *kta* introduced in div. I B (3, 4, 71 etc.) is by 1, 1, 5 exempt from the rule of div. II (7, 3, 84). Sū. 7—10 define phonological terms; sū. 11—19 define the *pragṛhyatva* and enumerate the cases.

1, 1, 20—43. General analysis. Classes of words (20, 23 sq., 27 sqq., 37) and of suffixes (22, 26, 42 sq.); technical names and indications of these groups and rules bearing on them (e.g. 28—36). Sū. 20 deals with conjugation, sū. 22 with derivation, the sūtras 23—36 with declension, sū. 37—41 with indeclinability and 42 sq. again with declension. The irregularities of arrangement: 1⁰. sū. 21 to be interpreted as an associative insertion (cf. *da-d-mah*) or rather as a distinctive sūtra (§ 71 no. 2) separating sū. 20, deverbative formations from sū. 22—36, denominative and declensional derivation; 2⁰. sū. 42 sq., placed after the treatment of the indeclinables and so characterised as 'insertion by emergency' (cf. *pada-bha*-passage 1, 4, 14—20, the *adhikāra*-sūtra 1, 4, 1 and § 71 no. 4).

1, 1, 44—67. Technical-grammatical development: substitution (*ādeśa*, 45—63), augmentation (*āgama*, 46 sq.) and rejection (*lopa*, 60—63) included; anubandhas, technical terms and forms of expression referring to these phonological and morphological alterations (64—67). Irregularities of arrangement: sū. 44 is a distinctive insertion; sū. 45 is placed before 46 sq. without perspicuous reason.

1, 1, 68—75. Further technical expressions. Sū. 73—75, introducing the term *vṛddha*, have special interest for the theory of denominative noun-derivation (adhy. 4, see Böhtlingk, II p. 277* s.v.); the entire passage 68—75 is placed as an associative digression after 44—67.

1 pā. 1 with its many *paribhāṣā*- and *saṃjñā*-rules has on the whole a general character.

§ 78. Analysis of adhy. 1 pā. 2.

1, 2, 1—26. Mutation and accentuation. The anubandhas *ñ*, *ṇ*, *ṅ*, *k*, *p* and the rules of mutation: *ñit*- and *ṇit*-suffixes treated as *ñit*-suffixes (1—3), *apit* as *ñit* (4), *liḍ apit* as *kit* (5), *liṭ* as *kit* (6), *ktvā* (with restored *kit*), *san*, *liṇ* with *sic*, and *sic* (7, 8—10, 11—13, 14—17; *anuvṛtti* of *ātmanepadeṣu* in (11—17); superseded *kit* (*ktvā* 18, *niṣṭhā* 19—21, *ktvā*

¹⁾ See §§ 29—60.

and *niṣṭhā* 22); facultative *kit* (*ktvā* 23—25, *ktvā* and *san*, 26 1)). — The arrangement is mainly based on the principle of mnemotechnical economy, and partly on parallelism; notice the use of *anuvṛtti* in several sūtras; the passage is quite a piece of virtuosity.

1, 2, 27—40. Vocalic quantity and vowel-modulation (accent); the sūtras 34—38 about ritualistic recitation are an associative insertion and probably an interpolation; *saṃhitāyām* does not refer to a ritual text (cf. Böhtlingk's translation) but to coherent speech or recitation (in antithesis to *avagraha*, broken up or discontinued reading for exegetic purposes).

As the correlation between mutation and accent was known to Pāṇini, the sections 1, 2, 1—26 and 27—40 cohere and take up again the subject of 1 pā. 1 (sū. 1—19).

1, 2, 41. Distinctive insertion; *apṛkta* as term for a suffix of one sound, e.g. the *s* as a declinational or conjugational termination.

1, 2, 42—46. Grammatical terms referring mainly to composition: *karma-dhāraya* (42), *upasarjana* (43 sq.), *prātipadika* (45 sq.); the definition of *karma-dhāraya* is an 'insertion by emergency' (§ 71 no. 4), the sūtras 43 sqq. follow according to associative or even thematic coherence. Moreover the terms *upasarjana* and *prātipadika* are made use of in the following passage (47 sqq.).

1, 2, 47—73. Morphology and semasiology of motion and declension. Shortening (*hrasvatva*, 47 sq., 50) of final vowel in noun becoming neuter or *upasarjana* (*o > u*, etc., see 1, 1, 48); sū. 49 and 51, rejection of suffix; sū. 51 sq., general rules about *vyakti* and *lopa*; grammatical concord. (The sūtras 53—57 form an interpolation, see § 79). Sū. 58—63, rules on grammatical number; sū. 64, definition of dual and plural; sū. 65—68, 70 sq., 72 sq., 'objective' and grammatical concord with reference to family-names and words expressing relationship, to certain pronouns, to herds of cattle. The succession of the sūtras is mainly regulated by logical division: general rules about both *vyakti* and *vacana* (51 sq.), idiomatical expressions with reference to *vacana* (58—63), and social rank (*vṛddha* and *yuvan*) and gender. The sūtra defining dual and plural (64, cf. SP. 1, 4, 21 sq.) is placed before the group 65 sqq., as likewise dealing with *śeṣatva*.

Character of pāda 2. Pāda 2 shows a certain parallelism to pā. 1; thus in pāda 2 the discussion of vocalic mutation with the addition of the definitions of vowel-modulation or accent is taken up first: 1, 1, 1—19 // 1, 2, 1—40; then some remarks are made on the compound, whilst the corresponding passage in pā. 1 treats of the word in general: 1, 1, 20—43 // 1, 2, 42—46; and thirdly the discussion of nominal gender and number uses the notions *ādeśa* and *lopa* with their indications as explained in pā. 1 (1, 1, 44—67 // 1, 2, 47—73). However, pā. 2 in its last part (47—73) has moreover the character of a closed and independent discussion of nominal gender and number (cf. § 75 no. 3).

¹⁾ Böhtlingk translates the technical indication *ral* by 'ein Consonant mit Ausnahme von *h*, *y* und *v*', read '... von *y* und *v*'.

Note I. Examples to sū. 1, 2, 47. — As Böhtlingk adds no examples to this rather important sūtra, some instances of its application are added here:

formation of the neuter of adjectives: *naṣṭa-śrīḥ* (nom. sg. m. and fem.) > *naṣṭa-śri* (idem neuter), Monier Williams, Grammar § 190;

formation of an *avyayibhāva* of which the second member is a noun ending in long vowel or diphthong: **anu-gaṅgā-* > **anu-gaṅga-* (2, 4, 18 and 1, 2, 47) > *anu-gaṅgam* (2, 4, 83 in combination with 4, 1, 2; 7, 1, 24 and 6, 1, 197).

§ 79. The interpretation of the interpolated passage 1, 2, 53—57.

The sūtras 1, 2, 53—57 are neither sufficiently clear in Böhtlingk's translation nor in the commentary of the Kāśikā. A few suggestions and surmises are here added.

The Mahābhāṣya (I p. 229) explains *tad* in sū. 53 as referring to the different artificial *saṃjñās* such as *ṭi*, *ghu*, *gha*, *bha* (adhy. 1 pā. 1 sū. 64, 20, 22 and pā. 4 sū. 18); the opponent says such *saṃjñās* should not be have been taught because a *saṃjñā* ought to show clearness and bear weight (*tat-prāmāṇyād*), but the right theory is, 'instruction makes the term' (*saṃjñānam saṃjñā*).

The Kāśikā and Böhtlingk connect *tad* of sū. 53 with *vyakti-vacane* ¹⁾ in sū. 51. For the following of the commentary of the Kāśikā the reader will receive some help by the information that the indication *lup* ('change of meaning with no adding of suffix and no changing of gender and number') is met with in the following sūtras:

- | | | |
|-------|---------|---|
| 4, 2, | 4 sq. | name of time derived from name of asterism, |
| 4, 2, | 81 sqq. | „ „ empire „ „ „ „ inhabitants, |
| 4, 3, | 166 sq. | „ „ fruit „ „ „ „ tree, |
| 5, 2, | 105 | „ „ spot „ „ śikatā and śarkarā, |
| 5, 3, | 98, a | [nick-]name of an individual person based on similarity, |
| 5, 3, | 99, | proper name given to an idol (<i>vāsudeva</i> etc.) which was made by a <i>devalaka</i> as a means for obtaining alms, |
| 5, 3, | 100 | a symbolical expression used as a proper name; e.g. <i>devapatha</i> . |

The Kāśikā, thus, differs from the Mahābhāṣya, in taking *saṃjñā* in the meaning of 'proper name' and directs the polemics against 1, 2, 51 in connexion with SP. 4, 2, 81 sqq., 5, 2, 105; 5, 3, 98 sqq., ignoring the two cases 4, 2, 4 sq. and 4, 3, 166 sq. in its argumentation. It further interprets *yoga* in sū. 54 and 55 (cf. *yuktavat* in sū. 51) in the technical meaning of the etymologists (MWD. p. 856: 'the connexion of a word with its root, original or etymological meaning') and as antithesis to *rūdhi* (l.l., p. 885: 'the more amplified or popular or conventional meaning').

¹⁾ See Wackernagel I p. LXII note 4.

The interpretation of sū. 53—55 by the Kāśikā can therefore be paraphrased as follows: the theory of *lup* as applied to the interpretation of proper names should have been left out, since the proper names are in themselves authoritative (53) and there is no need of any etymological or learned interpretation (54), for if we could apply such an interpretation to some of the proper names, how could others exist which do not allow such explanations? (55).

Whilst Böhtlingk attributes the whole set of sūtras, 1, 2, 53 sqq. (with the exception of 57) to an ancient antagonist, the Kāśikā gives in this respect no information about 53—55, but takes Pāṇini himself to be the author of 56 sq.

In sū. 56 *pradhāna* is explained by the Kāśikā as *pradhānopasarjane* (the main and subsidiary member of the compound, which together express the main or intended idea) and *pratyaya* as *prakṛtipratyayau* (the original stem or root and the suffix, which together express the speaker's intention); the further interpretations of this commentary, however, may be put aside as not convincing. So then, in my opinion, the whole sūtra is to be attributed to an antagonist, and its translation runs: the exposition of the significations of *pradhāna* [and *upasarjana*] and of the *pratyayas* [i.e. such lists as 4, 1, 92—4, 2, 91; 4, 3, 25—4, 3, *fin*; etc.] must not be taught, since something else [than the instruction, namely idiomatical use] is authoritative with reference to meaning.

To sū. 57 Böhtlingk annotates (Nachträge und Verbesserungen, I p. 477): 'Da Pāṇini weder *kāla* noch *upasarjana* erklärt, kann dieses Sūtra ... ¹⁾ seine Entgegnung auf die 1, 2, 53 fgg. gegen ihn gerichteten Angriffe sein'. Pāṇini's argumentation thus could be paraphrased as follows: 'I am right in treating the subjects objected to in 53—56 since other grammarians discuss similar subjects'. However, the statement that Pāṇini nowhere discusses *kāla* and *upasarjana* is incorrect, and the whole argumentation attributed to Pāṇini, is childish and futile.

In my opinion a text-mistake or incorrect expression is the cause of all difficulties, for *kāla* and *upasarjana* do not form a coherent unity and the latter term, moreover, is already included in *pradhāna* of sū. 56. If we now accept *kalopapade* to have been the original reading, this compound would exactly refer to the 3d adhyāya (cf. 3, 2, 84, *bhūte*; 3, 2, 123, *vartamāne*; 3, 3, 3, *bhaviṣyati*, and the adhikāra-sūtra, 3, 1, 92, *upapadam*...).

Thus we have arrived at a coherent interpretation, which can be summarised in the two following theses:

1. The interpolation consisted originally only in sū. 53, an antagonistic opinion current in the old grammarian schools and well explained and refuted by Patañjali. Its insertion after 1, 2, 52 is due to the artificial (*kṛtrima*) term *lup* used in sū. 1, 2, 51.

2. Afterwards the term *saṃjñā* was misunderstood, and a long series

¹⁾ Blot out *als* in the edition.

of objections were interpolated by schoolmasters, who did not understand the worth of Pāṇini's researches.

§ 80. The notion *pramāṇatva* in linguistic science. Pāṇini and his opponents in sū. 53—57.

The relation between Pāṇini and his opponents with reference to grammatical *pramāṇatva* can be illustrated by the history of linguistic science in Europe. Before the foundation of comparative linguistics the aim of the grammarians as pupils of the old Greek sophists and philosophers was to teach how to use one's language well and effectively, the grammar of the eighteenth century still being a normative science. But by the discovery of the coherence of the Indo-European languages the interests of the scientific linguists became directed towards the historical development of language and with the help of phonetics as a branch of physics and the mechanistic psychology of Herbart they tried to find the factors of this development. It was, as a comparison by De Saussure precisely expresses the state of things, as if botanists were studying the morphology of a plant by taking only lengthwise diagrams of its branches and forgetting to look at any transverse diagram. It is true, the writers of schoolgrammars clung to the old methods, and some scholar or other like Delbrück tried to unify old and new methods by writing a comparative compendium of syntax, which, however, neither by its psychological premisses could explain much, nor satisfy the demands of full description felt by specialists.

So the posthumous work of De Saussure came to light, in which the author tried to unify and correct the old unsatisfactory methods. Next to the historical treatment followed by the nineteenth century scholars we are in need of a descriptive method, which no more strives at laying down rules born in the theoretical brain of a legislative grammarian, but searches the rules that are unconsciously and instinctively active in the minds of the people as a linguistic unity.

And it is this theoretical interest which we often can detect in Pāṇini's researches, but miss in the schoolmaster's spirit and easiness of his opponents, who interpolated sū. 1, 2, 53—57.

§ 81. Analysis of adhy. 1 pā. 3.

The 3d pāda of the 1st adhy. has only one subject: the discussion of the *kāraḥ* (e.g. *kartar*, sū. 14; *karman*, sū. 13; *abhiprāya*, cf. the terms 'ātmane'- and 'parasmai'-*padam*) and *bhāva* (sū. 13), as expressed by the conjugational terminations. The anubandhas used in this connexion by the Dhātu-Pāṭha are an additional *anudātta*-vowel after a consonantic root and of *ṛi* after a vocalic root for the indication of the 'media tantum' (1, 3, 12) and an additional *svarita*-vowel or *ṛi* for the indication of the 'genere mobilia' (1, 3, 72) whilst the absence of these anubandhas ¹⁾ indicates the

¹⁾ This means that roots ending in a consonant receive as activa tantum the addition of an *udātta*-vowel; See Liebich, DhP. § 25.

'activa tantum' (1, 3, 78). The subject is announced by sū. 1 'dhātavaḥ'.

From this follows that in the passage 2—9 the anubandhas of the Dhātu-Pāṭha take the first place and the anubandhas of the Sūtra-Pāṭha only receive attention by associative extension (cf. § 70). Böhtlingk, therefore, misunderstood Pāṇini's intentions, when he left out all *dhātu*-examples in his comments to sū. 3; cf. $\sqrt{i-k}$, DhP. 2, 38, Liebich's edition p. 16; $\sqrt{dā-p}$ 2, 50, 1.1.; $\sqrt{dhe-t}$ 1, 951, p. 14 etc., and Liebich §§ 36—43. Further, we notice that the sūtras 3, *hal antyam*, 5, *ādir ñi-tu-davaḥ*, and 9, *tasya lopah*, form the framework of the passage, whilst sū. 4 and 6—8 are insertional. The sūtras 10—11 form either an associative or distinctive insertion.

With regard to its character pā. 3 may be described as a closed and independent discussion (cf. § 75 no. 3) of one subject.

§ 82. Analysis of adhy. 1 pā. 4.

1, 4, 1—2. Adhikāra-sūtras regulating the mnemotechnical construction of 1, 4, 1—2, 2, *fin.*; cf. the interpretation given of these sūtras § 30.

1, 4, 3—9. Technical terms bearing on the declension of the *i-*, *ī-*, *u-* and *ū-*stems; the passage has the character of a bridge between the general sūtra of the declinational endings (div. IB, SP. 4, 1, 2) and div. II, see the cross-references in Böhtlingk's translation.

1, 4, 10—12. Associative or distinctive insertion. Definition of light and heavy syllables, (cf. SP. 1, 2, 27 on vocalic quantity). If the insertion is due to associative influence, then the distinction of *i-* and *ī-*stems etc. has led up to it.

1, 4, 13—20. Definitions and general rules about *aṅga*, *pada* and *bha*. The term *aṅga* bears on all forms of derivation with the inclusion of conjugation and declension. *Pada* has (1) a wide meaning ('word') and (2) a limited technical meaning with reference to declension and denominative derivation of roots and nouns; *bha* is limited to declension and denominative derivation of nouns. The passage has the character of a bridge between div. IB and div. II (cf. §§ 40—46).

1, 4, 21—22. Definition of plural and dual (cf. SP. 1, 2, 64) as an introductive associative insertion before the discussion of the *kāraḥ*.

1, 4, 23—55. Discussion of the noun-cases as adjuncts to a verb; this theory of the *kāraḥ* is closely related to the syntax of the noun-cases given in 2 pā. 3, forming with this section a discussion of closed and independent character.

1, 4, 56—98. The theories of the *avyavas*, especially the *upasargas*, *gatis* and *karma-pravacaniyas*. The section has a 'general character', being important for the theory of the noun-cases (2 pā. 3), the formation of *kṛts* with a *gati* as *upapada* (adhy. 3) and sentence-accent (8 pā. 1).

1, 4, 99—108. Morphological definitions of the active and middle verbal terminations (cf. SP. 3, 4, 78) and participles, of the grammatical number of finite verb and noun; the term *vibhakti*. Concord in 'person' between

finite verb and subject; the notion *upapada*. The section, dealing both with conjugation and declension, forms the thematical ending of pā. 4.

1, 4, 109—110. *Samhitā* and *avasāna* defined. 'Distinctive insertion'.

The pāda is characterised by the great number of subjects touched upon: morphology of declension (3—9), terms of grammatical analysis (13—20), theory of the *kāraḥ* (23—55) and *avyayas* (58—98); *vibhaktis* of verb and noun. In this feature the pāda is parallel with 2 pā. 4.

§ 83. Analysis of adhy. 2 pā. 1 and 2.

The two pādas, dealing with the theory of the compounds, have the character of a closed and independent discussion.

| Divis. | sūtra | Subject of adhy. 2 (pā. 1 and 2) |
|---------------|--------------------------|---|
| <i>adhik.</i> | 1, 1—4 | Adhikāra-sūtras. |
| A | 1, 5—21 | The indeclinable compound (<i>avyayī-bhāva</i>). |
| B | 1, 22— 2, <i>fin.</i> | In general: the declinable compound (with the exception of <i>prāsaṅgika-sūtras</i>). |
| Ba | 1, 22— 2, 22 | <i>Tatpuruṣa</i> (one member determines the other; as a rule <i>upasarjana</i> precedes) |
| „ i | 1, 22 sq. | Introductory; the <i>dvigu</i> as species (cf. § 33 note I). |
| „ α | 24—48 | <i>Kāraḥ</i> -relation between the two members. |
| „ β | 49—71 | <i>Kāraḥ-dhāraya</i> ; (sū. 52: <i>dvigus</i>) |
| „ γ | 72— 2, 7 | Idiomatical and peculiar <i>tatpuruṣas</i> ; first member expressing the situation of a part (Engl. 'fore-arm') or the fraction (Engl. 'ha'penny'). Preceding member governs subsequent member: <i>prāpto jivikām</i> > <i>prāpta-jivika-</i> ; <i>māso jātasya</i> (cf. Kāśikā and Speyer § 128 Rem. 2) > <i>māsa-jāta-</i> ; the negation compounded with noun or <i>kṛt</i> : <i>abrāhmaṇa-</i> , <i>akurvant-</i> ; <i>iṣad</i> with a noun that is no deverbative. |
| „ δ | 2, 8—17 | <i>Ṣaṣṭhī</i> -compounds; 8—9 positive rules, 10—16 negative rules, 17 exception to an exception. |
| „ ε | 2, 18—22 | <i>Tatpuruṣas</i> with <i>avyaya</i> or <i>upapada</i> (3rd adhy.) as preceding member, cf. §§ 29—60. |
| Bb | 2, 23—28 | <i>Bahuvrīhis</i> . |
| Bc | 2, 29 | <i>Dvandvas</i> . |

| Divis. | sūtra | Subject of adhy. 2 (pā. 1 and 2) |
|--------|----------|--|
| C | 2, 30—38 | Order of the members of the compound. General rule about the place of the <i>upasarjana</i> , and the exceptions 30 sq.; order in <i>dvandvas</i> (Bc), <i>bahuvrīhis</i> (Bb) and the <i>karma-dhārayas</i> (subclass of Ba). Notice: 1. the separation of <i>karma-dhārayas</i> (38) from <i>tatpuruṣas</i> (30); 2. the retrograde order of <i>dvandva</i> etc. For 2, 2, 35 cf. SP. 6, 3, 9 sqq. and Speyer § 224 Rem. 2). |

§ 84. Wackernagel's division of the compounds.

Wackernagel's division of the compounds (Altind. Gramm. II 1) is mainly based on Pāṇini's treatment of the subject, with only a few alterations:

- A. *Dvandva*, p. 149—173.
- B. Determinativkomposita (*tatpuruṣa*), p. 174—272
 - a. mit Nomen verbale als Hinterglied (cf. specially SP. 2, 2, 18 sqq. and 3rd adhy.), p. 174 sqq.
 - b. mit Adjektiv als Hinterglied, p. 232
 - c. mit Substantiv als Hinterglied, p. 241.
- C. *Bahuvrīhi*, p. 273—307.
- D. Komposita mit regierendem Vorderglied, p. 308—321.
- E. Unregelmässige Verbindungen, p. 321—329.

Critical remarks. — As to Wackernagel's division between Bb and Bc, compare such rules as SP. 2, 1, 30 *guṇavacanena*. — In class D Wackernagel distinguishes two sub-classes a. Präverbien und Adverbien regieren Hinterglied; b. Verbalform als Vorderglied. With reference to class D the author himself recognises that we have to do here with a kind of *bahuvrīhis*; consequently there are two classes of *bahuvrīhis* with preceding *karma-pravacanīya*:

- a. the class of *adhijya*-¹⁾ (said of the bow to which the string is fastened), *ἔμπτεις* (of the mother in whom the child lives);
- β. the class of *anuloman*-²⁾ (going along, *anu*, the growth of the hair), *ἔνδημος* (being in the country, living amidst the people).

Both classes have *dhātu-lopa* in common, but differ in the direction of the relation expressed by the *karma-pravacanīya*. But besides Wackernagel's inconsistency in his classification it seems doubtful whether a *karma-pravacanīya* may be said to govern a noun-case (§ 28).

To his class Db ('Komposita mit regierender Verbalform als Vorderglied') Wackernagel observes (II 1, p. 315 § 120a): 'Von den

¹⁾ Wackernagel II p. 280 § 110 a; Hirt, Idg. Gr. V § 232 in fine.

²⁾ Wackernagel II p. 308 § 118; Hirt V p. 384 § 235.

Grammatikern nicht als besondere Kategorie anerkannt, aber in allen Perioden des Altindischen belegt'. We may, however, consider these compounds to be closely related to Wackernagel's class Ba (Pāṇini's *kṛt*-compounds of the 3rd adhyāya), although differing from them in the order of the members (cf. Hirt, *Idg. Gramm.* V p. 394 § 238). For instance compounds such as *jahi-stamb(h)a-* or ἀρχέτακος could be described as *tatpuruṣas* with reversed order.

With these notes I hope to defend Pāṇini's conception in its historical value, but it is far from my intention to depreciate the researches by Von Schroeder and Jacobi on the historical origin and development of the compounds.

§ 85. Analysis of adhy. 2 pā. 3.

Sū. 1-*fin.* Syntax of the noun-cases (§ 23 sqq.). The section has the character of a closed and independent discussion.

§ 86. Analysis of adhy. 2 pā. 4.

2, 4, 1—31. Grammatical number and gender of compounds. Sū. 1—16, rules on the singular number of [*samāhāra-*]*dvigus* (SP. 2, 1, 51; § 33 note I) and *dvandvas*; sū. 17—31, rules on the gender of compounds; the Kāśikā explains *sa* in sū. 17 as referring both to the *samāhāra-dvigus* and the singularised *dvandvas*; sū. 18, *avyayibhāvas* taken as neuter for morphological reasons, see SP. 1, 2, 47; sū. 19—25, cases enumerated in which a second, feminine noun becomes neuter, (compounds expressing a collectivity); sū. 26—31, the gender of [dual or plural] *dvandvas* and *tatpuruṣas*. Since Pāṇini gives no rules for the gender of nouns, the section should be considered to be an appendix to adhy. 2 pā. 1 and 2; for the rest it has the character of a closed and independent discussion.

2, 4, 32—34. Substitution (*ādeśa*) of stems. Enclitic stems of the demonstrative pronouns.

2, 4, 35—57. Root-substitution or heteroclitic conjugation.

2, 4, 58—85. Various subjects under the common heading *luk*: sū. 58—70, rules on patronymics, dynasty-names etc.; sū. 71, loss of case-ending *a*. before denominative root-suffix and *β*. in a *prātipadika* (esp. in the first member of a compound); sū. 72—81, the derivation of the thematic present, of different aorist-forms, and the periphrastic perfect; sū. 82—84, the formation of indeclinables; sū. 85, the periphrastic future. Strictly speaking the sūtras 83 sqq. treat of *ādeśa*, and no longer of *luk*.

Although in appearance the *pāda* only deals with *vyakti* and *vacana* of *samāsa*, *ādeśa* of stem and root, and *luk*, it really contains the discussion of very many various subjects, being in this respect parallel to adhy. 1 pā. 4.

§ 87. Summary; general conclusions about the internal composition of the adhyāyas 1 and 2.

The detailed analysis given in §§ 77—86 allows the following conclusions:

The author has given complete pādas (1 pā. 3; 2 pā. 1—3) to subjects which demanded an extensive discussion. In the pādas 1, 1 and 1, 2 the most fundamental grammatical notions are explained. The shorter discussions are placed at the end of 1 pā. 2 or collected in the fourth pāda of the first and second adhyāya. The last mentioned fact combined with the character of 1, 4, 109 sq. as a 'distinctive insertion' (§ 71 no. 2) proves the two adhyāyas to be unities in respect to composition (cf. § 73 sq., IAa and IAb).

Finally, taking into consideration that the main subjects of grammar are its fundamental notions and the theory of declension, conjugation, composition, indeclinability and derivation, we can give the following concise table of the first two adhyāyas:

| General subjects | 1, 1 | 1, 2 | 1, 3 | 1, 4 | 2, 1 | 2, 2 | 2, 3 | 2, 4 |
|----------------------|------|------|------|------|------|------|------|------|
| fundamental notions | — | — | | | | | | |
| theory of declension | | — | | — | | | — | — |
| „ „ conjugation | | | — | — | | | | — |
| „ „ composition | | | | | — | — | | — |
| „ „ indeclinability | | | | — | | | | — |

§ 88. The place of the first two adhyāyas in the plan of composition of the total work.

The discussion of the *pada-bha*-passage and the *ku-gati*-passage has proved that the first two adhyāyas must have formed, from the very beginning a part of the Sūtra-pāṭha.

Although several parts of these adhyāyas have a general character (e.g. 1 pā. 1 and 1, 2, 1—46) or form a bridge between div. IB and div. II, on the other hand very extensive portions, such as the discussion of the compounds or the noun-cases, agree in character completely with the sections which make up adhyāyas 3—5. Therefore we may symbolise the composition of the Aṣṭādhyāyī by the formula: (1, 2; 3, 4—5). (6—8). In other words, the first part of the argumentation needed for proving the scheme of division given in § 73 sq. has come to a close.

§ 89. The dichotomical division of the adhyāyas 6—8. Exposition of the problem.

Adhyāyas 6—8 form a unity of composition when compared with adhy. 1—5, the group 1—5 discussing the components of the words and their meanings and the group 6—8 explaining the coalescence of word-components into words and of words into sentences.

The first division of these three adhyāyas into the group 6—7 and the single adhyāya 8 is evident, for, although the distribution of the subjects over these adhyāyas cannot be described with accuracy in a short formula,

yet overlooking the difficulties caused by Pāṇini's mnemotechnical devices and his definition of the term *pada*, we can say in general that adhyāyas 6—7 explain the coalescence of the word-components into words, and adhy. 8 the further development of the sentence.

Similarly the dichotomical division of adhy. 8 into 8, 1 and 8, 2—4 is clear, the first pāda treating of the sentence-accent, and the three last pādas (with exception of some *prāsaṅgika-sūtras*) of the articulative-phonological changes of the words as parts of the sentence.

The problem which now remains, is how to prove the dichotomical division of 6—7. This case is not easily solved, owing to the author's tendency to attach greater importance to mnemotechnics than to logical consistence.

§ 90. The five thematical sections of adhy. 6 and 7. Putting aside for a while the question whether there is any dichotomy we can *prima facie* distinguish five sections:

- a. Adhy. 6, 1, 1—157, general phonological rules,
- β. Adhy. 6, 1, 158—222, accent of uncompounded words,
- γ. Adhy. 6, 1, 223—6, 2, *fin.*, accent of compounds ¹⁾,
- δ. Adhy. 6, 3, 1—*fin.*, morphology of the first member of a compound; a few *prāsaṅgika-sūtras* (97 sq., 110) refer to the second member; sū. 111—113 are inserted for the sake of mnemotechnic economy (the *anuvṛtti* of *dirghaḥ* being made use of); the *sūtras* 131—137 form likewise an insertion and probably an interpolation,

ε. Adhy. 6, 4, 1—7, 4, *fin.* has for *adhikāra-sūtra* sū. 6, 4, 1 *aṅasya*, whereas a subsection (6, 4, 129—*fin.*) has moreover the *adhikāra bhasya*.

The first thing that strikes us is that section γ forms a concatenative link between β and δ, so that we can combine β + γ as theory of accent or γ + δ as theory of compounds, sū. 6, 1, 158 '*anudāttam padam ekavarjam*' serving as *adhikāra* for the sections β + γ, and sū. 6, 1, 223 *samāsasya* as such for γ + δ. In the second place it is worth while noticing that the *adhikāras aṅasya* and *bhasya* stand in correlation with *padasya* of 8, 1, 16 provided that *pada* is taken here in the sense of a noun-stem under certain conditions, (cf. the *pada-bha*-section, SP. 1, 4, 14 sqq.). However, since this correlation is only secondary because of *padasya* in the first place denoting the complete word as part of a sentence, the question of examination has only to do with the grouping of the sections α—ε. If Pāṇini, when construing his plan of composition, has been influenced by the supposed tendency to dichotomy, was then the antithesis between (γ + δ) and ε, nominal composition against nominal derivation, or that between (β + γ) and (δ + ε), accentuation against articulation, foremost in his mind?

¹⁾ Indicating the first syllable of a stem by *a*, the last by *u*, the originally *udātta* syllable by *i*, we can distinguish six types of compound-accentuation: *āiu-aiu*, *aiu-aiu* etc. or I *a* etc. and II *a* etc.

In my opinion, the decision falls in favour of the latter alternative; in other words the adhyāyas 6—7 are divided into:

- i. introduction: 6, 1, 1—157, general morphological rules,
- a. sections ($\beta + \gamma$): 6, 1, 158—6, 2, *fin.*, accent of word and compound,
- b. sections ($\delta + \epsilon$): 6, 3, 1—7, 4, *fin.*, morphology of composition and derivation.

To support this conception two arguments may be adduced: 1. in this way the introductory part, exempt from the dichotomical division, becomes shorter (α instead of $\alpha + \beta$); 2. there arises parallelism in the construction of the adhyāyas 6—7 and the 8th adhy.: 6, 1, 158—6, 2, *fin.* // 8, 1, theory of accent, and 6, 3, 1—7, 4, *fin.* // 8, 2—4, theory of articulative-phonological and morphological coalescence, such sūtras as 8, 2, 4—6 only being of a *prāsaṅgika*-nature.

But was the theory of accent indeed thus separated by Pāṇini from the rest of word-coalescence? And why was it necessary to break the regular dichotomy of the total composition by placing the sūtras 6, 1, 1—157 as an introduction?

§ 91. Accent as a linguistic fact.

Pāṇini gives the definition of the pitches of accent (*udātta*, *anudātta*, *svarita* and *sannatara*) in the passage 1, 2, 29—40 following the sūtras 27—28, which define the vocalic quantity. Accent or glottic modulation and duration are thus likewise qualities of the speechsound. And likewise accent in the theory of derivation and composition should be taken as one of the factors in the process of coalescence.

In support of this conception, moreover, the authority of De Saussure may be quoted (*Cours de linguistique générale*, p. 103) 'la syllabe et son accent ne constituent qu'un acte phonatoire', and 'le signifiant¹⁾ étant de nature auditive, se découle dans le temps seul et a les caractères qu'il emprunte au temps: a) il représente une étendue, et b) cette étendue est mesurable dans une seule dimension, c'est une ligne'.

But are these statements indeed so absolutely true as De Saussure puts them? The syllable with its accent may be called an articulative, and thus psychical act, and as such a strict unity. But in biology and psychology the rule holds good that the unity is strictly a unity, i.e. no mere arithmetical sum or mechanical conglomeration of parts, and yet the unity goes together with the existence of the parts. The parts interact mutually and are likewise determined by the totality.

Thus the syllable is a unity and one psychical act and at the same time this one act contains a plurality of innervations — innervations of muscles round oral and nasal cavities, the glottis and the apparatus of expiration; and the accent as produced by such a partial innervation receives also a certain independence as an auditive unity. The syllables follow one

¹⁾ The word is a unity (*signe*) with an auditive-articulative aspect (*signifiant*) and a notional aspect (*signifié*).

another and together form the words and the stream of spoken language, and this one stream is again a strict unity, one psychical act, in each of its utterances or sentences. And yet in this main current the accents of the successive syllables form an under-current with a certain independence of its own. And so this accent-current can subject itself to stylistic forms, and the spoken language becomes a phrase that is sung; and this song, although still a unity in the strict sense of the word and therefore one line, is at the same time the duality of text and melody. And in the same way as in polyphonic music many melodies simultaneously form many lines, although the time in which all this happens is one dimension, so does the current of accent flow onward within the wide current of spoken language, for, do not let us forget, the science of mechanics, however beautiful and sublime it may be in itself, does not represent the only shape that human thought can take, and it is more than time for the students of moral sciences to desist from a bigoted adoration for physics.

Pāṇini, therefore, was right in defining accent as a quality of the vowel (or syllable) and at the same time treating it as a linguistic fact with its own individuality.

§ 92. The introductory character of the passage 6, 1, 1—157 and the dichotomical division of adhy. 6—8.

Adhy. 8 pā. 2—4 do not only teach the sentence-coalescence but for mnemotechnical reasons also i.a. the coalescence of a stem in *pada*-condition with its suffixes and the substitutions and rejections of consonants which have to do with this subject. And it is this deviation from the logical scheme owing to mnemotechnics which again forced Pāṇini to break the dichotomical division of adhy. 6—7 by the introduction 6, 1, 1—157, in which he treated of the vocalic *saṁdhi* and other subjects that are independent of such distinctions as *pada*, *bha*, *aṅga* and *samāsa*.

And although a fuller analysis of the last three adhyāyas with reference to the distribution of their rules is desirable, for the present the thesis may be accepted that the composition of the last three adhyāyas obeys the formula: ($i = 6, 1, 1—157$), $\{(Aa = 6, 1, 158—6, 2, \text{fin.}), (Ab = 6, 3, 1—7, 4, \text{fin.})\}$; $\{(Ba = 8, 1), (Bb = 8, 2—4)\}$. See §§ 73 sq.

§ 93. Wackernagel's judgment on the composition of the Aṣṭādhyāyī.

Wackernagel, the grammarian, in showing in so many places in his *Altindische Grammatik* his great detailed knowledge of the Hindu grammatical science has done full justice to Pāṇini as a trustworthy and competent witness of linguistic facts. But the Aṣṭādhyāyī is more than a depository of facts; as a monument of ancient Hindu science it demands from us a historiography obeying the rules of historical piety and perspective. In this respect Wackernagel, although in a less offensive manner than Whitney, falls short in his judgment on Pāṇini (*Altind. Gramm.* I p.

LXII), when he expresses himself in the following words: 'Pāṇini selbst nennt eine Anzahl Vorgänger. Ja sein Werk scheint wesentlich eine Neu-redaktion eines, vielleicht vor ihm schon mehrfach umredigierten, grammatischen Grundwerks zu sein. Ein rationeller Grundplan schimmert durch..... Aber dieser Aufbau wird beständig durch einzelne Regeln oder ganze Reihen von Regeln durchbrochen, offenbar, weil man nach Bequemlichkeit an beliebiger Stelle einschob, was bei weiter entwickelter Forschung neu hinzukam. Auch mochte die Möglichkeit Worte zu ersparen etwa dazu führen, Regeln aus ihrem natürlichen Zusammenhang herauszureissen und anderswohin zu versetzen.'

So then Wackernagel, a great grammarian, could not, as historiographer, see anything in Pāṇini save the dimlight of a rational plan and the deep night of historical chance, miserliness in words, love of ease, a breaking down of natural connections, the whole a whirlpool of caprice. Indeed, those ancient Hindu grammarians have committed crime in not being born as modern, logical, strenuous and capriceless European scholars, writers of books as well arranged as the safes of a bank! However, the explorer who has in fact done so much to give us a full understanding and a juster appreciation of Pāṇini, really deserves something better than an ironical tirade. Let me say then that we, Europeans of the twentieth century, although grateful to the genius of the ancient Greeks, which with the help of geometrical textbooks and well-balanced political speeches has taught us the power and beauty of the logical intellect, also realise that there is something else in the world of thought besides logic. Contemporary psychology has taught us that creative synthesis does not merely belong to critical intellect and consciousness, but that also our dreams have their laws of composition, that the mind of the child, though weak in logical discrimination, possesses a gift of construction, which shows itself in the original touches of its traditional games, and that the artist is artist just because there is still so much of the child in him.

When, then, in the Aṣṭādhyāyī we meet with a wonderful, puerile and ingenuous *anubandha*-system, with mnemotechnical interests weighing heavier than any logic in the world, with associative digressions in unlimited number, then we confess: we adore Pāṇini because he reveals to us the spirit of India; we adore India because it reveals to us the Spirit, the Spirit.

APPENDIX.

§§ 94—97. Discussion of some technical difficulties. English translation of French and German quotations.

§ 94. The definition of *upasarga* (§ 19).

According to the *Kāśikā* the expression *kriyā-yoge* must be taken as a supplement to the *sūtras* and specially the *adhikāra-sūtra* of the passage 1, 4, 60—79. Thus, whilst the passages, quoted in § 19, compel us to interpret *kriyā-yoge* in *sū.* 1, 4, 58 sq. by 'in connexion with [the notion of] an action, [either expressed or implied]', *kriyā-yoge*, when supplement to *sū.* 60 has the narrower meaning of 'in connexion with [the notion of] an action [expressed]' = 'in connexion with [a word expressing] an action, [i.e. either a finite verb or a deverbative]', cf. § 17 no. 3 and Note. Undoubtedly the redaction of the *Sūtra-Pāṭha* is logically not quite satisfactory here.

§ 95. The meaning of the *pratyāhāra sup* (§ 45 and *passim*).

In the first place *sup* is the technical designation of (A) the declinational terminations (*SP.* 4, 1, 2 and 1, 1, 71). Moreover, according to 1, 1, 72 *sup* indicates (Ba) a declined noun, and according to the rules for *pratyaya-lakṣaṇa* (esp. 1, 1, 62) it likewise includes (Bb) the nominal stem, e.g. as the preceding member of a compound (1, 2, 46 and 2, 4, 71) and Bc the indeclinables (2, 4, 82).

So, when in 2, 1, 4 the rule is given: [*sup*] *saha supā* and we read in 2, 1, 6 *avyayam* as a substitute for the first *sup* in this formula, then there is, strictly speaking, no question of an exception, but only of a limitation. A similar remark holds good for *sū.* 2, 2, 18, where according to algebraic reasoning it is not quite accurate to say (cf. § 45 p. 37 l. 7) that the second *sup* of *sup saha supā* is put aside by Pāṇini, rather should we understand that this *sup*, in antithesis to what precedes, is extended to both the meanings Ba and Bc.

However, inconsistencies will necessarily often arise owing to the artificiality and unfitness of algebraic expression for describing linguistic facts. And so it is no matter of surprise that the *Kāśikā*, too, takes *sū.* 2, 2, 18 as an exception to 2, 1, 4 in its interpretation: *ku-gati-prādayaḥ samarthena* (cf. 2, 2, 1 and § 31) *śabdāntareṇa saha nityaṃ samasyante*.

§ 96. The well-planned construction of the *Aṣṭādhyāyī* illustrated by the interpretation of *SP.* 1, 1, 3.

The insufficient number of cross-references and the often too limited choice of examples in Böhrtlingk's translation do not always allow us to see the ingenious construction of Pāṇini's work.

In order to interpret sū. 1, 1, 3 *iko guṇa-vṛddhī*, i.e. the guṇa of *i* and *ī* (Śiva-Sūtra read in combination with 1, 1, 69), *u* and *ū*, and *ṛ*, short or long, *e*, *o*, *a[r]* and their *vṛddhī* is *ai*, *au*, *ā[r]* we ought to reckon with the following facts:

1. the vocalic *l* has to be omitted since the only instance *√kḷp* is treated by Pāṇini's method of theoretical fiction as if it were *kṛp* (DhP. 1, 799 etc.);

2. *i*, *ī* are replaced by *e* or by *ai*, and *u*, *ū* by *o* or by *au* according to 1, 1, 50. Since Pāṇini takes it for granted that the guṇa and *vṛddhī* of *ṛ* contain an *a*-sound, we may surmise that his articulation of the *ṛ*-sound had an *a*-colouring ('neutral' colouring). The addition of *r* is taught by 1, 1, 51. For the substitution of *ṛ* by *ir*, *ur*, *īr*, *ūr*, cf. 6, 1, 111; 7, 1, 100 sqq.; 8, 2, 77;

3. although *a* is the guṇa of *a* itself and *ā* its *vṛddhī*, yet the sūtra is not formulated as **ako guṇa-vṛddhī* in view of such sūtras as 7, 2, 1 (where Böhtlingk supplements: 'für ein auslautendes *i*, *u*, *ṛ* nebst ihren Längen', cf. 1, 1, 52), and 7, 3, 83 sq.

§ 97. English translation of French and German quotations on behalf of the Hindu reader.

Page 33 § 38. *Ku*, an indeclinable called *gati*, and *pra* with its associates are likewise compounded. 19. Likewise a supplement if this be no finite verb. — 20. Also a supplement with an indeclinable, but only when this is an absolute ending in *am*. — 21. Also an instrumental and one of the following cases but this is not necessary. — 22. Likewise with an absolute in *tvā*.

Page 36 § 44 i.f. 'a well-planned and not only virtuosic but also ingenuous text-book'.

Page 66 § 91. 'The syllable and its accent are only one phonetic act, and the significant being of an auditory nature only flows onward in time and has the characteristics which it adopts from time, a) it represents an extension and b) that extension is measurable in one single dimension, it is a line'.

Page 68 § 93. 'Pāṇini himself mentions a number of predecessors. His work, indeed, intrinsically seems to be a new version of a perhaps before him frequently altered grammatical groundwork ... A rational basis glimmers through. But this constructive work is constantly interrupted by single rules or by whole rows of rules, obviously while what was newly added by further developed research was at will inserted for convenience' sake. The possibility to spare words could also lead towards distorting rules from their natural connexion and transposing them somewhere else'.

Expression of thanks. — Dr H. E. Buiskool has assisted the author by reading the proofsheets and suggesting here and there an interpretation of his own.

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